STATE HOUSING PROVISION IN SARAWAK:
AN EXAMINATION OF ACCESSIBILITY, HABITABILITY, SUSTAINABILITY AND AFFORDABILITY.
The Case of the Sarawak Housing and Development Commission, Malaysia.

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A Thesis Submitted to the University of Newcastle upon Tyne in Fulfilment for the Degree of Doctor in Philosophy in Architecture.

June 1995

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ABSTRACT

It has been widely shown that the provider-based approach to the urban low cost housing problem in the developing world has ended in failure. It has not only failed to meet the demand for such houses but the costs of producing them are so enormous that they are hard to sustain. Worse, the beneficiaries of these houses do not even meet the affordability levels required even at their subsidised selling prices. Many causes have been suggested and recommendations proffered. Yet the urban housing problem remains as acute as ever while the approach is still actively pursued by some developing countries.

This research aims to examine the performance of provider-based housing policy in the context of the *accessibility* of the target group to the houses, the *habitability* of these houses in terms of their standards and quality, the *sustainability* of the project(s) under study, and the *affordability* of the households which have succeeded in getting these houses. It uses three project areas constructed by the Sarawak Housing and Development Commission (SHDC), East Malaysia, as case studies. This study stands on the premise that it is not so much the approach which is at fault but the operational environment within which it operates; namely, the political, economic and social (even cultural) context. Any approach may not succeed if it fails to take cognisance of the peculiarities and distinctiveness of this contextual stage.

The basis of the analysis is based on two types of data. The first is mortgage data which contains all the socio-economic information (as well as loan portfolios) of the beneficiaries who have taken loans from the SHDC. This information was collected when the beneficiaries first applied for the houses, and combined with a household survey of the same beneficiaries to provide a comprehensive set of data used for the analysis.

The findings of the research support the conclusions of many similar studies; that the main causes of the poor performance lies mainly on the supply side of the housing market, most of which can easily be solved; thus confirming the premise that the success or failure of any approach depends heavily on the rules within which it has to operate.

ACKNOWLEDGEMENTS

Many people, both in Malaysia and Britain, have assisted me in the preparation of this study. My special appreciation goes to my supervisor Dr. A. Graham Tipple for his guidance and suggestions, but above all for his patience and support, during the preparation of this work. I would like also to thank all the staff members and fellow post-graduate colleagues at CARDO for their advice and assistance in my study, particularly Mr. Tony Hyland who co-supervised me during my first year of research.

Many thanks go to the staff of the Sarawak Housing and Development Commission, especially Mr. Abdul Hamid bin Mohd. Yusoff, its Chief Executive Officer, for their help in the course of my field-work in Kuching and access to information in their computer data-base. I also acknowledge the contributions made by others outside the Commission, who are too many to name.

I would like to thank my sponsors, the Universiti Sains Malaysia, for granting me study leave and providing funds for me to undertake this study. Lastly, my deepest gratitude go to my parents for unceasingly egging me on to succeed. And to my wife and children, I thank them all for having to brave through the challenges over the past three years smilingly.

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ABBREVIATIONS AND ACRONYMS

ASB	Amanah Saham Bumputra (Bumitputra Benevolent Fund)
ASN	Amanah Saham Nasional (National Benevolent Fund)
BAL	Block Alienation Scheme
DE	Divisional Engineer
DLS	Director, Land and Surveys Department
DPO	Divisional Planning Officer
EPF	Employees Provident Fund
EPU	Economic Planning Unit
JKR	Jabatan Kerja Raya (Public Works Department)
LHA	Local Housing Authority
MHLG	Ministry of Housing and Local Government
MRP	Ministry of Resource Planning
NCR	Native Customary Land
NEP	New Economic Policy
PAS	Parti Islam SeMalaysia (Malaysian Islamic Party)
PBB	Pesaka Bumiputra Bersatu
PBDS	Parti Bansa Dayak Sarawak (Sarawak Iban People's Party)
PLCHP	Public Low Cost Housing Programme
SLCHP	Special Low Cost Housing Programme
SEDC	Sarawak Economic Development Corporation
SHDC	Sarawak Housing and Development Commission
SNAP	Sarawak National Party
SPU	State Planning Unit
SUPP	Sarawak United People's Party
TOL	Temporary Occupational Licence
UMNO	United Malay National Organisation

Note
MR refers to Malaysian Ringgit.
One Malaysian Ringgit or MR1 is equal to approximately US$0.44 or Sterling £0.25.

CHAPTER ONE

CHAPTER ONE

INTRODUCTION TO THE STUDY

1.0 INTRODUCTION

The suffocating problem of urban housing faced by most countries today, especially those from the developing world, is likely to worsen in the future. Increasing population, unencumbered urbanisation, uncontrolled rural-urban migration (Smith, 1972), unrealistic developmental standards (Ramachandran, 1972; McGee, 1979) will ensure the continuation and exarcebation of this demand for urban shelter. Characteristically, this problem has provoked different responses from housing academics. Peattie (1979) rose to the challenge by validly questioning or attempting to explain why such a problem exists. McGee (1979), on the other hand, denies the existence entirely and says, as does Ramachandran (1972), that the problem is there because of the application of some unacceptable world standards. On a completely opposite stance, Angel and Benjamin (1976) not only accept the existence of the problem but argue pessimistically that it can never be solved. Nevertheless, hypothetical or otherwise, this problem has generally elicited direct government intervention in the urban housing market, both in the form of the provider-based and support-based approaches, the results of which have incited more questions than answers (Sanoff, 1990). Burns and Grebler (1977) and the UNDP (1991) hinted that the provider-based response (Tipple, 1994) accounts for at least 20 percent of the total investment of a typical developing country, which can be equivalent to as much as 5 percent of its Gross Domestic Product. Despite such direct intervention involving enormous capital expenditure, the housing problem is little nearer to being solved. In simple market jargon, this failure is alluded to as the inability of the housing supply side of the housing market to meet the ever increasing housing demand. In political discourse, the failure and the huge amount invested insinuate not only the hidden expenditure objectives, but also the hypocritical desire to be seen to be doing something.

The apparent failure of this provider-based approach in all its various forms has actuated a number of responses and alternatives, the most recent of which is the World Bank's so-called enabling strategy (1993). Obviously, this change in tactic as applied to housing has its determinants in the failure of the Redistribution with Growth strategy of the late 60's and early

70's (Chenery, 1974) as well as the debacle of the structural adjustments a decade later. On a wider perspective, such a change can also be adduced to the emergence of Reaganism and Thatcherism in the 80's, an association that will of course draw flak from the liberal thinkers in housing studies. What this is likely to mean is that, like its previous predecessors, this approach will soon be hijacked and become a central unifying subject by those with opposing political stances along the lines of the great Turner-Burgess housing debate (Turner, 1976, 1978; Burgess, 1977, 1978). While a healthy debate is always to be applauded, the danger lies wherein proponents are inspired by politically filled emotions which in the end obscure life's realities and lead us to believe in the absolutes of all human endeavours and the denial that certain things do fall within grey areas. Each school of thought in the Turner-Burgess debate, for example, has its own advantages and disadvantages, but as far as the homeless are concerned, it is the effectiveness of each to put up decent and affordable urban housing on the ground that matters, not the colour of the political complexions that each adorns. The successful implementation of their strengths on the ground, to all intent and purposes, will obviously depend on the character and will of their implementors as well as the political economy[1] within which they operate. To claim, therefore, that one school of thought is superior than another is like saying an apple is better than an orange, or vice versa, for a starving person.

1.1 THE PROBLEM STATEMENT

This study accedes to the failure of housing supply to satisfy the overwhelming housing demand as the major cause of the urban housing problem. That this failure is apparent in both the centrally-controlled as well as the so-called free-market economies brings to the fore the futility of clutching onto one and jettisoning the other. The fact that a segment of the poor will always require assistance in acquiring basic urban shelter only confirms the need for state intervention. At the same time, the glaring failure of intervention, not only in assisting those it is meant to help, but more importantly, in putting a damper on the overall housing market and the wider economy, points to the need also to leave the market largely free of unnecessary interference. These apparently contradictory demands, therefore, require a position that recognises the importance played by both a free market and state intervention. In other words, a mixture of both

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1 Political economy, as it is understood in this study, recognises non-economic (interdisciplinary) matters as relevant, retains a sense of history in explanations of economics, and uses appropriate techniques in solving real world problems. While accepting that the housing situation in a country reflects the structural conditions in the society, the reality of housing practice also depends upon contingent conditions, in the expression of policy, the characteristics of housing markets, the essentials of housing finance and the cultural conditions under which the state operates (Pugh, 1986; 1990). See also Rakodi (1992: 34).

is needed, but how much of each will depend on the economic system under study. In a centrally planned economic system, there obviously exists the need for a loosening of the housing market structures, simply because this will encourage competition and liberate the housing market from artificially imposed costs and ultimately create a more efficient market. On the other hand, some degree of state intervention is to be expected in a free market system so as to ensure the involvement of those who are unable to compete, and there will be many of them, but not to the extent as to inhibit the growth of the market itself.

The stance taken by this study, therefore, is one that takes into account the overall political economy and suggests remedial actions based on it. In dealing with such issues as the so-called housing problem, the political economy of the country concerned is important as this will determine how much investment housing gets and how it is going to be spent. Like many other investments, it is not only the amount invested that will determine the size of the profits but also, and this is crucial, the manner in which the investments are made and the market mechanisms that are in place. Market performance may be improved simply by lubricating the right parts without completely overhauling the whole system. If new approaches are required then they have to be installed not by revolutionary means, but through sensitive evolution and revision of the current structures. Thus, it is simply not enough to suggest core housing, site-and-services, upgrading or even the enabling strategy as the panacea for urban housing problem. That conventional housing provision is a success story in Singapore and that upgrading is a proven approach in Indonesia do not necessarily suggest that they will also do well in other countries. Different conditions certainly call for different approaches and solutions. A proper diagnosis of the country's urban housing problem is therefore required and any prognosis must be tailored accordingly to its needs. Whatever the outcomes, a balance between the capacity of the government to provide and the affordability of the homeless to purchase has to be found.

While reasons behind the increasing demand for housing operate in a fairly straight-forward manner and are thus easy to discern, those that foster inelastic housing supply, though easy to identify, are much more difficult to comprehend. In a controlled economy, these forces operate irrationally, are heavily institutionalised and are controlled by a supposedly omniscience and omnipotent few. A similar situation exists in a free market system, but with a lower degree of institutionalisation which permits market forces to thrive and is motivated simply by profit. In either case, it is always the most vulnerable, i.e., the low income that is marginalised. It is against this background that some countries purposely establish para-statal housing agencies as an affirmative intervention to help the low income in the housing market (Carmon, 1992).

Unfortunately, the performance of these agencies have failed to live up to their given tasks (Skinner and Rodell, 1983; Tipple, 1994). Numerous studies on the reasons for this poor performance, not just on the part of state agencies but on state intervention as a whole, have overwhelmingly pointed to the factors on the supply side of the housing market as the main culprits, for example, land (Abrams, 1964; Turner, 1967, 1969; Barros, 1983; Malpezzi, 1988; Drakakis-Smith, 1988; Pacione, 1990; Tipple, 1994), standards (the UN, 1971, Hake, 1977; Mabogunje, Hardoy and Misra, 1978; Hardoy and Satterthwaite, 1981; Ramachandran, 1972; Cabannes, 1983; Payne, 1984; Mayo and Gross, 1987; Ludwig and Cheema, 1987; and King, 1990), housing subsidies (Sanyal, 1981; UNCHS, 1989), general intervention (Keare and Jimenez, 1983; Malpezzi, Mayo and Gross, 1985, Klak, 1992a). On the demand side, the low-income household's access to affordable finance (Turner, 1976; Soni, 1981; England and Alnwick, 1982; Altmann, 1982; Wegener, 1982; Gilbert and Ward, 1984) seems to be the main enigma. Much more distressing are the conclusions of studies that, even after state intervention, point to continuing marginalisation of the poor in both the developing (Burgess, 1987; Baross, 1984; Klak, 1992b; Skinner and Rodell, 1983 and Payne 1984) and developed world (Balchin, 1979; Bassett and Short, 1978; and Bourne, 1981). In an attempt to unravel the underlying causes of these failures a study by the World Bank (1983) found that weak implementation capacity in Third World institutions, difficulty in recovering costs, and divergence between standards of provision and available resources are the main causes. Klak (1992b) concurs with these findings when he suggests that it is the *over-determined system of causality* - state elitism, financial access to formal sector employees, dominance of the market, and self-serving bureaucracy - which ensures that the poor will never be housed in housing provided by the state. Moreover, the resultant bloated bureaucracy has, more often than not, created a more chaotic market situation where government agencies not only compete with one another, but are also ignorant of each other's purposes and activities. When in the past, the homeless have to contend only with ordinary market problems such as land, tenure, access to finance and unrealistic standards, and so on, they must now also assert themselves against another bureaucratic obstacle that exists to serve another group of clients.

These findings prove two important and widely accepted points. Firstly, the intervening arm of the state, when left to its own devices, will simply outgrow itself into another self-serving monumental parasite. Secondly, the problem lies neither with the provider-based strategy nor with the support-based strategy, although specific problems are inherent in each. The problems as identified are all operational issues and relate to aspects of administration and institution. They can all be solved without necessarily overhauling or dismantling the whole system, which goes to show that, properly run and managed, parastatal agencies can and should create a better

functioning market than one that is free from state intervention. This is because the state agency has practically all the ingredients that are required to move the market forward. It is empowered, financed and supported by the state, manned by well-qualified personnel and given specific objectives to fulfil. All in all, the provider-based approach need not end in failure if its reason for being is strictly understood and followed, and the state fulfils its obligations by improving market structures that have impeded its performances in the past. In the worst possible scenario, only the type and scale of intervention need to be changed without calling for its total dissolution.

1.2 THE PURPOSE OF THE STUDY

Against the background outlined above, the main purpose of this study is to evaluate the poor performance of such an institution in the context of the Malaysian urban housing market, identify the underlying causes and suggest methods - within the existing framework - to improve it. However, in the face of the much empirical evidence which points to the failures of this provider-based approach (Turner, 1976; Habraken, 1972; Porteous, 1977; Skinner and Rodell, 1983, Tipple, 1994) one is justified in asking 'Why another similar study?' Many reasons can be put forward as a response to such a question, both generic and specific. That Malaysia in general, and Sarawak in particular, are still deeply involved in the provider-based strategy typical of the 60's when others have abandoned it as well as in the process of doing the same with its support-based strategy substitute, is a valid enough reason. Moreover, while recognising that the past record of this conventional approach of housing provision has not been encouraging, this study accepts that state intervention is likely to be a permanent feature in any future housing programme. This cognisance suggests that what is required is not simply the implantation of new, alien and untested structures over the existing ones, but solutions that are sensitively and individually tailored to the specific and proven strengths and weaknesses of a particular situation, at the same time taking into account the projected demands, the available resources as well as the implementing capacity of the agency involved.

Furthermore, studies along these lines have been carried out mainly in the developing countries of the African and Latin American continents, and the Asian sub-continent, with a few involving the developed countries in the western world. The dearth of such studies on countries in this part of the world, except in the nation states of Singapore and Hong Kong, demands a similar research especially when some of them, having been transformed into economic "tigers" and "cubs", are, strictly speaking, neither less-developed nor developed. Findings of such studies can therefore provide a comparative insight into whether they have fallen into the same bureaucratic

and self-serving traps as their counterparts elsewhere, and in so doing examine how well the poor have come out of it.

On a more specific level, this study is just a small effort that hopes to rectify the widely tolerated misconceptions throughout Malaysia and to do justice to the peoples of the state of Sarawak. It is not widely known, even amongst Malaysians, that any study on Malaysia, including housing, is usually a misnomer in that it focuses only on the Peninsular part of the country and excludes Sarawak and its sister state of Sabah in Borneo. In other words, when one speaks about the state of housing in Malaysia, it actually refers to the state of housing in Peninsular Malaysia. Many reasons account for this, two of which are the spatial distance (which is actually no excuse) and poor co-ordination between state and federal bodies (a consequence of real or imaginary reasons). This concentration on the Peninsula means that very few studies, including housing, have actually been carried out in Sarawak. Researches that do so have either been sponsored by the state itself or agencies related to it, or have been carried out by researchers who have their origins from the state.

On a more personal level, this study is carried out with the hope that it will end up more than other academic researches that are of no particular value to the very bureaucrats and state machineries they are meant to address. Local politicians, professionals and administrators, especially in Malaysia, are not just understandably slow, but sometimes overtly hostile, in accepting their faults and weaknesses when the research findings are based on the shortcomings and shortfalls of others, albeit well proven. It is in order to avoid this pitfall that this research is designed to have an 'applied' angle tailored for a client who could actually implement its findings. There are two factors which will, hopefully, help to achieve this. One, the close relationship that have developed between the author and the key personnel, and two, the rational political economy approach adopted should thwart any suspicion of any political motives as well as avert any mistrust and misconceptions on the objectives of the research other than purely academic and to help improve the agency's performances.

1.3 THE RESEARCH AIMS AND OBJECTIVES

This study has three basic aims which are; firstly, to fill in the gaps in the body of housing knowledge because of the scant research carried out in this part of the world; secondly, to enhance the quality of the existing body of material by adding to it new information relating to the same field of research; and thirdly, to provide a workable set of solutions to an existing and

real problem without being encumbered by ideological garbage. In order to achieve these aims, the following research objectives have been identified:

i) to analyse the political economic context of the problem being studied, in particular the rationale behind state intervention in the low cost housing market.

ii) to examine the national low cost housing policies and to determine to what extent have they been methodologically implemented or adapted to suit the local context.

iii) to critically assess the reasons why, if policy changes were carried out, this was necessary; or why, if no policy changes were carried out, no such changes were made if local conditions demand it in order to improve the effectiveness of policy implementation.

iv) to evaluate the effects of these policies - modified or not - on both the whole programme and the low income households that these policies are meant to help on the ground.

v) to critically scrutinise the reasons behind any questionable effects of these policies.

vi) to suggest proposals for a more effective policy implementation with a view to resolving the existing problems.

1.4 THE RESEARCH QUESTIONS

Within the context of the above discussions, and by building on the findings set bare by the World Bank (1983) and Klak (1992b), this study will focus mainly on four different, but interrelated and commonly discussed, aspects of the implications of state intervention in urban low cost housing. These are:

i) Have the poor, or the low income households, actually benefited from the policies and practices of the parastatal agency concerned? If not, why not? Who has? And why? How successfully, therefore, has this parastatal agency performed in respect of its equity objectives?

ii) Empirical evidence has pointed to the unrealistically high standards adopted in the construction of houses by similar agencies elsewhere. Does the same apply in this case? If yes, why? Has it to do with external factors, for instance developmental regulations beyond its control? Or internal causes, i.e., the simple desire to provide high quality houses based on the mistaken belief that this is the way to help the poor?

iii) If the answer to question two is yes, what are the implications on production costs? On state subsidies? On the selling price and cost-recovery? Is there any attempt to ensure safety of repayment such as selling to households who can be expected not to default? In a nutshell, can similar programmes be repeated elsewhere without incurring unrecoverable costs?

iv) How does the agency reconcile the conflicting demands of providing cheap affordable housing for the low income on one hand, and the high costs of production due to high development standards on the other? At the government controlled prices, can all the beneficiaries afford to pay for these houses? If not, what are the divergences between the beneficiaries actual affordability levels and the government's imposed levels? What are the factors that determine the affordability of these beneficiaries?

1.5 THE RESEARCH HYPOTHESES

The research hypotheses outlined below have been developed individually from each of the research questions formulated in the previous sub-section. Each one of those questions will therefore be answered by each of the following hypotheses, which are;

a) The low cost housing units built by the state agency in the urban area of Kuching have not benefited the identified target group. This hypothesis evaluates the *accessibility* of the target group to these houses.

b) The high standards adopted for these houses meant that the houses are of high habitable quality. This hypothesis evaluates the *habitability* of the houses.

c) The immense gap between the actual cost of producing the houses and their sales prices coupled with the poor rate of recovery makes the projects difficult to replicate. This hypothesis evaluates the *sustainability* of the housing programmes.

d) All beneficiaries of these low cost houses, irrespective of their income group, have affordability problems. This hypothesis evaluates the *affordability* of the low cost houses.

1.6 THE MALAYSIAN SITUATION

The Federation of Malaysia is made up of three physical entities, Peninsula Malaya, Sabah and Sarawak. The Peninsula , itself made up of 11 separate states, achieved its independence in 1957

and together with Singapore formed what was then known as the Federation of Malaya. The Federation of Malaysia was formed six years later in a tripartite agreement among the Federation of Malaya, Sabah and Sarawak bringing the total number of states to 14. Singapore, however, opted to secede in 1969 and the Federation was then left with 13 states. Like all federal systems, the grid of power radiates from the capital, in this case Kuala Lumpur in the Peninsula, and ends in limited autonomy of the various states. The South China Sea separates the two states of Sabah and Sarawak from the Peninsula prompting the division of the Federation to be consistently known as Peninsular or West Malaysia, comprising the 11 remaining states of Malaya, and East Malaysia, comprising the two states of Borneo. UMNO, or United Malay National Organisation, the political party that forms the backbone of the coalition government at Federal level, controls ten of the states, is a senior partner in one[2], and forms the main opposition in the state of Kelantan[3]. In Sarawak, this party is not represented and the State Government is controlled by a coalition of state-based parties which, although members of the federal coalition, have different interests and aspirations at state level.

Malaysia, like all developed and developing countries, also suffers from the so-called urban housing problem and has, in response to this, its own Ministry of Housing to oversee it. The seriousness with which the government views the problem can probably be gauged from the 10 times this Ministry has changed names or shifted ministries in 40 years of independence. It does, however, spend a huge proportion of its public expenditure on housing, although only a fraction of it is actually spent on low cost housing, much of it by way of the well discredited provider-based solutions which have failed to improve housing supply. Relative to the amount invested, the quantity of the low cost houses produced have been limited but the quality is high, resulting in huge amount of subsidy and strangling supply. Apart from the numerous times the Housing Ministry has changed names, the government's interest in housing is also laid bare by its own admission that housing is a basic consumer good which 'necessarily has to be subordinated to the economic objectives' (Malaysia, 1966). This shows that its active involvement in housing production is driven by the realisation that the sector has a significant contribution to the overall national economy which, in itself, is not necessarily bad for housing, and not, as it claims, to ensure that 'all Malaysians, particularly the low-income group, have access to adequate shelter' (Malaysia, 1986).

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2 The State of Penang is governed by a coalition of National Front parties but is led by the Gerakan, a Chinese based party, although UMNO is a senior partner in the state government. The situation may have changed after the general election last month (April 1995) where UMNO could now lead the state government. Details are, however, unavailable at the time of writing.

3 The State of Kelantan is controlled by the Parti Islam Malaysia, or PAS.

Such contradictions are well illustrated in practice. Housing production in Malaysia is undertaken both by the public and private sector. The public sector, for example, does not limit itself to becoming a housing producer for low income groups but also involves itself actively in the production of high and medium cost houses, thus competing directly with the private sector. In fact, its performance in the production of high and medium cost houses is much better than its performance in the production of low cost houses, which in themselves are limited in number. Some suggest that this preoccupation with the production of high and medium cost houses is strongly influenced by its historical concern to shelter its well satiated public employees, while others justify it on the grounds that the private sector is doing a commendable job in the production of low cost houses. While the latter is true to a certain degree, it must be remembered that the private sector's participation in the provision of low cost housing is engineered not by a moral desire to achieve equity but by government legislation and incentives. And it is wrong to suggest otherwise.

In a private housing development where land is provided by the state, all the houses are of low cost and the associated developmental regulations are greatly compromised in order to encourage private participation. In a wholly private development, the same reduction in standards is applied but developers are required to construct at least 40 percent of the houses as low cost houses. It can thus be argued that, by putting this burden on to the private sector, the 'public' sector is freed from such accountability and thus can concentrate on the production of high and medium cost houses which it is actually promoting. This dubious situation can be further vindicated by the private sector's concentration in the construction of high cost houses and the neglect of medium cost houses as the former reaps higher profits. Such myopic activities, while satisfying the desires of the upper class to collect houses (most of these houses are sold as holiday or second and even third homes), have squeezed the low cost housing market further because of forays from the middle class who are unable to compete for the high cost houses (Wong, 1986). This is known as "raiding" (Strassmann, 1977) and is common where there are insufficient medium cost houses in the market. If, therefore, the state is serious in ensuring access to adequate shelter to all Malaysians, it should at least abandon its involvement in the production of high and medium cost houses and concentrate instead on low cost housing. At the same time it must also encourage the private sector to be involved in the production of medium cost housing as it has with low cost housing.

The federal system practised by the country presents yet another problem, both at policy and implementation level. Housing policies are formulated at federal level, while implementation of such policies are carried out by the states which, more often than not, have their own state

housing policies determined by their own peculiar problems and priorities. Such an arrangement was found to be, on one hand, expedient as the states have control over their lands, and on the other, problematic, owing to these policy differences. In the state of Johore, for example, private developers and housing cooperatives have not only to meet the 40 percent low cost housing requirement demanded by the national housing policy, but to also allocate 40 percent of these houses to the state government for allocation to supporters of the ruling party(ies). In the sister states of Sabah and Sarawak on the Island of Borneo, low cost houses are sold over the national capping price of MR25,000 per unit because of allegedly higher costs of materials and labour. Nevertheless, all states except for Sabah and Sarawak give great access to federal housing agencies to implement their policies. Apart from these federal agencies, which are both involved in the provision of urban and rural housing, the states are also armed with their own agencies, usually the state's Economic Development Corporations, which provide a full range of housing types. In Sabah and Sarawak, the absence of any major involvement by federal housing agencies is compensated by the establishment of, in the case of Sarawak, the Sarawak Housing and Development Commission, which is the sole provider of urban low cost housing in the state but competes with the other state agencies and the private sector in the provision of high and medium cost houses. This peculiar arrangement, different from what is commonly seen in the rest of the country, will form the context of this research.

1.7 THE CONTEXT OF THE RESEARCH

The reasons for choosing Sarawak as the scene for the research are explained in the previous sub-sections. Its chequered history differs from those of the other states in Malaysia; having joined the federation on its independence from Great Britain (together with Sabah) six years after the others had achieved theirs. This political development, together with its geographical location and differing ethnic make-up create a stage which is totally different from the rest of the country and to a certain degree is manifested in its housing problem and the way it deals with it.

The actual research was carried out in Kuching, the capital city of 388,000 people (1991 figures) with an area of 1,868.8 sq. km., and focused on the low cost housing performance of the Sarawak Housing and Development Commission. Like most state agencies, this one was set up for political purposes with social objectives. Since its inception more than 10 years ago, almost ten thousand houses have already been or are still being constructed, the bulk of which come under the Public Housing Scheme and are targeted for the City of Kuching. How the low income households fare, their affordability and other related effects of intervention will be the subject of this research.

1.8 THE SCOPE OF THE STUDY

This study specifically looks at three conventional housing projects carried out by the Sarawak Housing and Development Commission within the City of Kuching in the Malaysian state of Sarawak. The focus on urban housing is made on the ground that, like most developing countries, it is a pseudo-problem created by the imposition of unrealistic standards (Ramachandran, 1972).

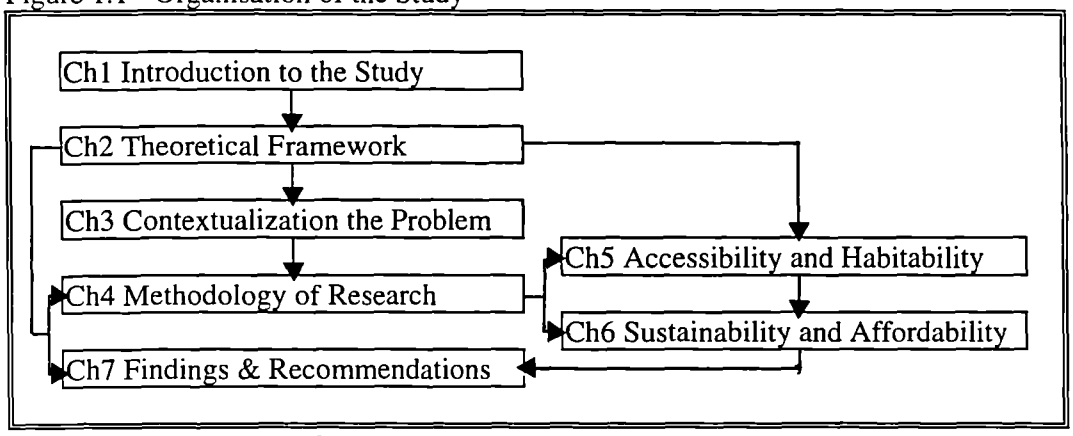
The study therefore looks at the housing policies and programmes implemented by the Sarawak Housing and Development Commission vis-a-vis its allocation process, effects of high developmental standards specifically on housing qualities, production costs and affordability. Three study areas have been selected and these are the Istana Dua Housing Estate, the Batu Kawa Housing Estate and the Siol Kanan Housing Estate. Istana Dua is much older than the other two areas and is particularly significant in the study's analysis of affordability and determinants of arrears among defaulters. The other two areas are much more recent and, although sharing many commonalities, differ in site characteristics. These differences are significant in the study's evaluation of the determination of the factors that contribute to the final construction costs of the projects and also in the evaluation of the agency's over-dependence on state land for its projects.

1.9 THE ORGANISATION OF THE STUDY

This study is structured into seven chapters. Chapter One, which acts as the introductory chapter sets out the justification behind the study, the problem statement, its purpose, aims and objectives, its scope and context. Chapter Two discusses the theoretical basis of the study focusing mainly on the rationale of state intervention in housing and its effects on the general market and the targeted population. Chapter Three outlines the context of the study, firstly by introducing the situation at national level, and then focusing on the specifics of the state within which the actual research is to be conducted. The purpose is to highlight the differences that exist between the two, that the situation in the state differs from that at national level in every way. In making prominent these differences, the problems and opportunities could be better understood and provide a clearer basis for improving the art of state intervention, at least in this particular situation. Chapter Four explains and justifies the various research methods, especially on data collection and analyses, adopted for the study. The choices are determined by the need to ensure validity, reliability, applicability and ability to generalise the findings.

Chapter Five and Six form the basis of this study's original contributions. Chapter Five analyses the two aspects of accessibility of the target population and habitability of the houses. It will examine the impact of state intervention on the low income households' access to the houses provided by the agency. The beneficiaries, both eligible and non-eligible households, are then asked regarding their satisfaction with the houses, the house prices and the monthly instalments. Their response to these three indicators will determine the levels of standards adopted for these houses. Chapter Six looks at the two aspects of project sustainability and beneficiaries's affordability. It will first examine the actual costs of producing the low cost units by calculating all possible quantifiable costs, as well as costing all non-quantifiable elements of the project. The resultant figures, when contrasted with the selling prices of these houses, will determine how much of the invested resources can be recovered and at the same time point to the sustainability of these programmes. The second part of this chapter will look at the beneficiaries' affordability, both eligible and non-eligible households, at the government fixed selling price. Those who are defaulting and have affordability problems will be identified and the reasons determined.

Figure 1.1 - Organisation of the Study



Note: Numbers refer to Chapters

Findings from the previous Chapters Five and Six will be summarised in Chapter Seven which is also the final chapter. The reasons as to why the low income households are still marginalised in the allocation of low cost housing, the causes that push up the production costs of these houses, and the determinants of arrears as well as the factors that determine a household's affordability level will suggest the type of solutions required. These will be discussed and recommended in this chapter. The overall relevance of these findings on provider-based approach in housing supply will also be examined as part of the study's conclusions.

CHAPTER TWO

CHAPTER TWO

THEORETICAL FRAMEWORK

2.0 INTRODUCTION

The problem of housing for the low income urban households is not a monopoly of any particular country. Nor is it a distinct feature of any political system. It is a universal problem, but specifically so among the developing countries. Only its characteristics differ, due to the contextual political economy and the varying perceptions held about housing. These differences determine the types of response that governments adopt which can either result in the problem being, in some cases, ameliorated or, more often than not, magnified. An appropriate understanding of the term 'housing' is therefore essential if a proper response is to be made to solve the housing problem. Such an understanding has to be relevant to the overall context within which it is to be addressed, most crucial of which is the political economy of the country concerned and the economic background of the target group that needs to be housed.

Yet, the apparent failure of the housing market to meet the demand for low cost housing has always led to state intervention in the housing market, irrespective of its political economy. The existence of the low income group and the homeless and their rights to decent affordable homes are often quoted as a justification for such an intervention (Carmon, 1992), which is commonly characterised by the so-called provider-based strategy of the 60's and the support-based strategy of the 70's and 80's. While the *raison d'être* for such an intervention is to be applauded, it is the manner in which it is done, its implications on the wider housing market and, above all, its limited effects on the group it is meant to serve - in this particular case the low income group - that questions its validity as a policy. The influential role played by government intervention in affecting housing accessibility among this income group and its predominance in most, if not all, housing markets makes the motive and the role of the *gatekeepers* particularly controversial (Pahl, 1976). The question posed by Laswell (1958), 'who gets what when and how?' and subsequently followed by Smith (1977), 'who gets what *where*?' and ultimately improvised by Sanyal (1981), 'who gets what where why and how?' are as relevant today as they were then.

The purpose of this chapter is to examine the impact of state intervention in the housing market especially in terms of improving the *accessibility* and *habitability* of low cost housing to the low income group on one hand, and the *sustainability* and *affordability* of these housing projects on the other. These will be discussed in the overall light of the World Bank's redistribution with growth (RwG) development strategy principally in terms of the search for *cost-recovery, affordability* and *replicability*. It is accepted here that no projects can be sustained with high subsidies and low rates of cost-recovery.

2.1 THE TURNER-BURGESS DEBATE

The Turner-Burgess debate, now solidly embedded in the Self-help housing debate has, since coming to the fore in 1978, for many years acted as the point of departure for many a discussion on the housing problem of developing countries. As this debate has been widely reported and discussed elsewhere, see for instance Niented and van der Linden (1988) and Marcussen (1990), this section will only summarise the gist of the two schools of thoughts.

Turner first aired his ideas in the late 60's, based on his experiences working in the *barriadas* of Lima (Turner, 1967). This work, along with those by Abrams (1964) and Mangin (1970), radically challenged the long held negative views regarding the poor and poverty (Lewis, 1966). It was generally accepted then that the poor were entrapped in the cycle of poverty, and worse, they were there because of their own faults. Turner (1978) found that the poor were in fact very resourceful and left to themselves would strive to improve their lot as well as their settlements. Armed with these findings, Turner suggested that these people should be allowed the freedom and the autonomy to provide shelter for themselves, while the government should provide support by providing them with, and maintaining access to the necessary resources, i.e, determine what people can (prescriptive) rather than should (proscriptive) do. Central to his thesis is that such autonomy will enable the poor to control their activities as 'bridgeheaders' and 'consolidators', which ultimately will result in a home. Thus, it is not so much the value of this resultant house that matters, but the value attached to the whole process of producing it. He therefore suggests that any description of the house must include the actors, their actions and their achievements. Such a process therefore requires that the house be adaptable which consequently denies the role played by standard housing provision with its large-scale, centralised and bureaucratic structures. His ideas are therefore underlined by two opposing perspectives, i.e. the dichotomy between autonomy versus heteronomy (Turner, 1972). This can be translated in terms of production system as small scale versus large scale, and in terms of political and administrative system as decentralisation versus centralisation (Marcussen, 1990).

Turner suggests that the approach that he advocates would be progressive in nature and produce cheap housing of variable standards but high in use value.

These ideas have been much criticised by Marxist writers led by Burgess (1977, 1978, 1982, 1985 and 1987) and others like Lea (1979), Conway (1982), Harms (1982) and Ward (1982). Their objective centre on Turner's depoliticization of the housing problem (Nientied and van der Linden, 1988). They consider that the housing problem is but a part of the capitalist mode of production and should be viewed as such. This problem should be solved by the government by building high quality housing prescribed by existing standards and accessible to all. On this note, they accuse Turner of defending capitalism, endorsing housing inequalities, encouraging petty commodity capitalism and perpetuating a new imperialism. Burgess sees housing as a commodity and the approach suggested by Turner is a form of commodity production - that everyone involved in it are producers and whatever is produced commands value. Moreover, he claims that the poor are actually worse off under such a programme than in a true self-help situation (Burgess, 1985).

Other writers[1] feel that the arguments between the two sides seem to be on different levels and on different things. Nientied and van der Linden (1988) feel that Burgess's structuralist Marxist analysis is misleading to the debate as such an approach can be used to explain and condemn any existing and practicable policy as ultimately serving the interest of the ruling class. Marcussen (1990), on the other hand, sees Turner's concept as basically relevant at the activity level while Burgess's criticisms elevate the whole debate on to the theoretical plane, which effectively creates a gap between theory and practice. It is important to remember that the debate has been raging on ideas which have not, except for those programmes funded by the World Bank, been fully experimented anywhere else, and Lea (1979) was obviously referring to this when he said that the debate never had much meaning outside the highly theoretical and academic circles. More importantly, however, no one has attempted to suggest alternatives to Turner's ideas, the Marxists included.

2.2 TURNER'S IDEAS AND THE WORLD BANK APPROACH

The close similarities between the approach adopted by the World Bank and that of Turner's ideas (Turner, 1976) suggest the influence the latter has on the former. Both agree that housing

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1 See for instance, Nientied and van der Linden (1988), Gilbert and Linden (1987) and Marcussen (1990).

is a tool for development, that the housing crisis is a result of institutional problems, that conventional solutions to the housing problem do not work, and that there is a need to economise. Nevertheless, there are key differences between the two. The World Bank, for instance, does not dismiss conventional housing completely out of hand, but instead feels that it is acceptable depending on the market conditions. On economising, the World Bank favours shifting the responsibility to the private sector while Turner believes in giving autonomy to the people. Against Turner's users' autonomy and the importance of use or human value, the World Bank sees the market forces as the solution to housing problem, i.e., reducing the supply costs by lowering standards. Basically, the World Bank's approach is made from the government's perspective (good governance) while Turner looks at it from the users's perspective (needs satisfaction) (Williams, 1984).

2.3 THE CONCEPTS OF HOUSING

At its most basic level, housing simply means shelter. Obviously, housing is much more than shelter, so much more that it means different things to different people. Beyond this it can also perform roles that affect people in various ways, culturally (Rapoport, 1969); politically (Clark and Ginsburg, 1975; Harvey, 1977) and economically (Tipple, 1993). In itself housing can be seen as a process and a product. As a product, it is as much an economic commodity as any other good and thus possesses an exchange value. Even so, as the housing market makes up only a part of the wider socio-economic system, its output is determined both by the constraints imposed by the total system and the housing system itself. As shown in the previous sub-section, our understanding of housing has been complicated by housing academics whose definitions of housing now are flooded with ideological solicisms. To the Marxists, for instance, housing can only be properly understood when posited against capital formation and labour production. In doing this, they look at housing as a necessary good, a fixed good and an exchangeable good (Burgess, 1985: 271-312). Although such definitions - limited as they are along ideological premises - have managed to take centre stage in the housing literature, other definitions abound. Bourne (1981:14), for instance, has identified at least five common definitions of housing and these are housing as:

1 a physical facility unit or structure, which provides shelter to its occupants, but which also consumes land and demands the provision of physical services such water and sewerage as well as social services to households;

2 an economic good or commodity, a consumer durable good, which is traded or exchanged in a market and as an "investment" good which returns equity to its owner;

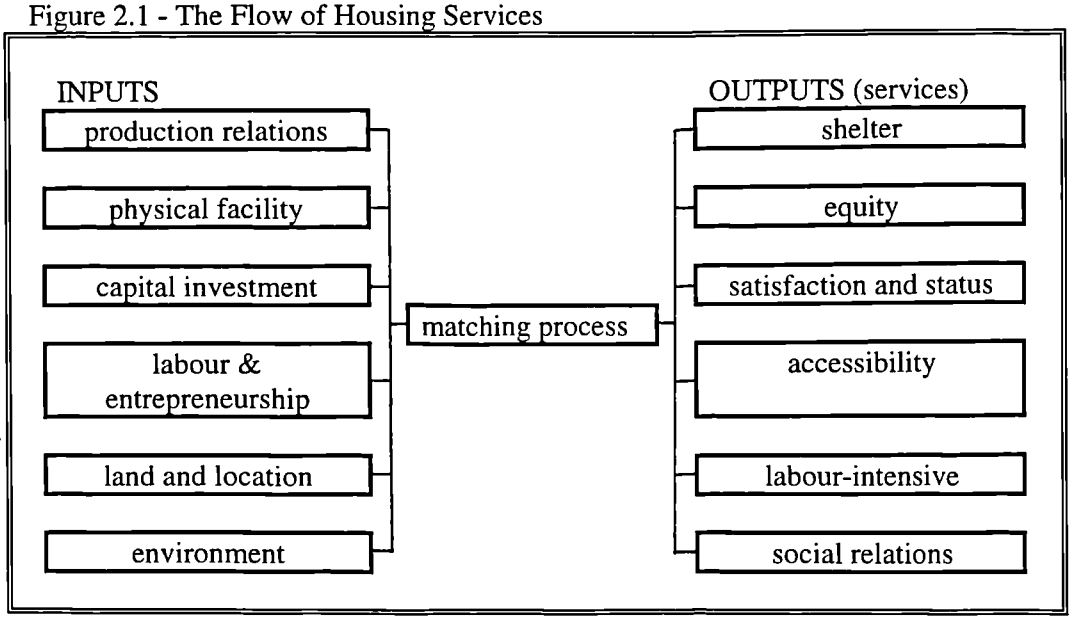
3 a social or collective good, as an element in the social fabric and in that society's set of social relations, and which is provided to everyone just as it attempts to do in education, food and, in most cases, health care;

4 a package or bundle of services - a view which recognises that the occupancy of housing involves the consumption of neighbourhood services (parks, schools), a location (accessibility to jobs and amenities) and the proximity of certain types of neighbours (a social environment);

5 a sector of the economy, a component of fixed capital stock, a means of producing wealth, and a tool of governments in regulating economic growth.

Based on these commonalities, Bourne then draws from them the various benefits (or disbenefits) that accrue to the various players involved in housing and called these 'housing services'.[2] These services are shown diagramatically below:

Figure 2.1 - The Flow of Housing Services



Source: (Bourne, 1981: 15)

2 Some writers like Landeau (1987) considers that housing is a service only when it is consumed by tenants and not by houseowners.

Bourne's classifications of the various services that can be derived from housing above matches closely with what McCallum and Benjamin (1985:279) refer to as the 'Established' economic perspectives on housing, i.e., housing as (Social) Consumption, as Improver of Health and Well Being, as (Macro) Economic Sector, as Stimulus to Savings and Investment, and as Indirect Contributor to Income and Production. While not disagreeing with the others, Benjamin and McCallum however felt that the classifications were a little restricted and suggested that they should be broadened to include the economics of housing, i.e., housing as Shop, as Factory, as Rental Income, as Financial Asset and as Entry Point into the Urban Economy. Such realisations that housing can and does bring in income for the owners or occupiers have been realised by people like Laquian (1983), and later empirical studies have confirmed such assertions (Strassmann, 1986; Gilbert, 1988; Raj and Mitra, 1990; Mehta and Mehta, 1990).

The various characteristics of the housing outputs/services as identified by Bourne as well as by McCallum and Benjamin above have a bearing on the type and magnitude of housing demand in a housing market. The matching process, on the other hand, is similar to a housing market where the housing production process is conducted. This will be further elaborated in the following section.

2.4 THE HOUSING MARKET

Similar to housing concepts, the abstraction of housing markets too are influenced by ideological positions. Thus, the neo-classical economists tend to view the housing market as a simplified activity area where there is perfect competition and where consumers' tastes are homogenous. Here, the private market and neo-classical economics can be seen as an analogy of pluralism - a strand of public choice theory - and political science. The way housing supply responds to housing demand in a private market is similar to the way political parties respond to pressure groups' demand in pluralism. Pitted against this, Marxist writers try to comprehend the housing market in the context of social and class struggle within the capitalist system. The problem here is that any market - and this includes the housing market - can be rationalised or criticised from both ends of the ideological spectrum, so much so that the arguments put forward by both in the end merely become academic. Since no two housing markets are similar, given their peculiar political economy, it is of utmost importance, therefore, to suggest ways in which each particular market can improve access by the poor to affordable and acceptable housing.

The characteristics of a housing market, therefore, depend on the political economy within which it is set. It can be anywhere from one extreme represented by the theoretically free *laisséz-faire*

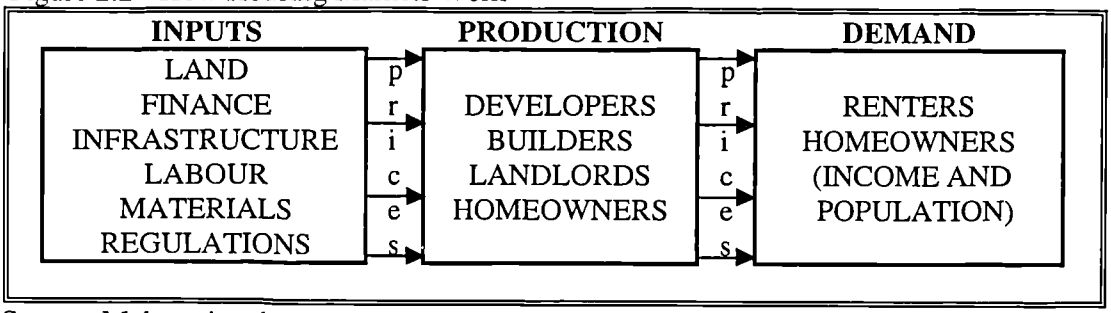
market economy where the housing production is left entirely to the logic of the market with little or no intervention from the state, to the other where the system is completely controlled by the state. In between these two extremes are found different shades of liberal to state controlled delivery systems. Generally though, the housing market is conceptualised as being made up of three separate but closely linked parts. These are the inputs for, the production of, and the demand for housing services. The housing inputs comprise such factors as land, labour, finance, building materials and infrastructure which are used to produce housing. The houses produced by this market, whether they are conventional or unconventional, high cost or low cost, are determined by the nature and characteristics of each of these factors. The production process, meanwhile, is manned by various housing producers like developers, builders, landlords and homeowners. Johnstone grouped these market players into four main categories; namely, the 'consumers, producers, the institutional infrastructures which affect production, and the nature of the political economy within which production occurs (the context)' (Johnstone, 1979).

On a slightly different note but obviously referring to the same elements, Mayo (1993) classified them into five; namely, the consumers, producers, the financial institutions, the central and local governments. Johnstone's infrastructure (financial institutions and regulatory bodies) or Mayo's financial institutions, central and local governments theoretically support both the producers and consumers to play in the housing market. In reality, the role that these institutions play can not only encourage the dynamism of the housing market but can also stifle its growth. The operations of the financial institutions can either increase or decrease consumers' access to finance and thus not only affect housing demand but also accessibility to housing.

In most housing markets, the producers (builders and developers), control the contemporary pattern of residential development within cities rather than the free choices of the households (Kirby, 1983:29). These producers either belong to the small group of large firms or large group of small firms. Within the context of low cost housing, it is the activities of the large scale producers that are important because it is only they that could afford 'to take raw suburban land, divide it into parcels and streets' (Checkoway, 1980) and produced uniform 'terraced housing intended for the lower and middle income groups' (Craven, 1975). The outcomes are similar in cases where the state has acted as developers, supposedly to mitigate the effects of market imperfection, although there are wide variations in the range of houses provided, wider variety of sites and in different urban locations, thus considerably challenging the patterns proposed by the demand based approaches.

The consumers, on the other hand, are made up of people who need houses, both owners and renters, and they generate the demand for housing. Akin to other goods produced in the market, there exists a contradiction between the objectives of the housing producers and the needs of the housing consumers. Rodell (1990) identifies three types of housing consumers; namely, the builder, the buyer and the renter. Of these three, the builder's behaviour and his/her affordability is the most difficult to explain and predict as no definite housing expenditure pattern can be discerned. Unlike the other two, his/her behaviour - as far as housing is concerned - is not fixed nor constrained by the financial institution (buyer) or the landlord (renter). It all depends on he/she himself/herself and thus is very erratic and not reflective of other builders. His/Her housing expenditure is seen both as payment toward the house and as part of wealth accummulation, and thus is seen as a life-long commitment, like that of the buyer. The buyer, however, has a more fixed and definite behaviour pattern as the amount that he/she puts aside toward the payment for the house is pre-determined by the financial institution that gives him/her the loan and his/her ability to keep up with this payment. Thus, the buyer's affordability is more transparent and his/her calculations will be based on his/her expected life time income, possibly as long as the next 35 years depending on the age when he/she purchased the house. To him/her, such long term commitments would not hinder his/her decision to buy as it would to a renter, since the payments are seen as a form of savings and investment. What matters are the level of monthly payments that he/she has to make, although his/her ability to come up with the downpayment for the house together with the rental value of the house would have make a significant contribution to his/her affordability level. Thus, due to the value of the house that accrues to him/her once payment is all paid for, the buyer will take a long term view on this investment and, moreover, is willing to pay more than a renter whose affordability is also based on his/her monthly rental but devoid of any investment factor. Mayo and Malpezzi (1984) suggest that this is particularly so in countries with few investment alternatives. The renter's view of the whole thing is simply payment for temporary use of the house, the rent of which is fixed between him/her and the landlord, and depends on the length of stay.

Figure 2.2 - How Housing Markets Work



Source: Malpezzi and Bell (1991)

While the producers wish to maximise profits, normally by increasing sales prices, the consumers want exactly the opposite, i.e., low costs to optimise benefits (Pickvance, 1976). Such contradictions compound the difficulties faced by the low income group who normally find that even the lowest priced houses in the markets are still far too expensive for them. The previous Figure 2.2 shows a schematic diagram of a housing market by Malpezzi and Bell (1991).

Many reasons have been put forward for the failure of the low income group to attain access to low cost houses. In the housing market, many of these reasons can be traced to the limited availability of cheap land, the high standards of housing adopted and the closed-nature of the financial market or the unreasonable rates of finance available; all of which contribute to the high costs of the houses and the failure of the target group to gain access to finance. The limited availability of land, for instance, can lead to monopolistic market situations leading to land speculation and hoarding. In the less developed world, this problem is most acute as ownership of land is 'structurally and spatially more concentrated and where income inequalities are wider than in advanced capitalist societies' (Johnstone, 1979). It is due to such situations that some writers, notably Marxist analysts like Burgess (1977) and Harvey (1977) claim that so long as these resources are in short supply, proper allocation of housing to the needy is impossible.

Land is obviously the single most important and most expensive factor in housing provision for the low income group. It is in response to this that researchers have long advocated for the formalisation of land tenure as a means to encourage land ownership and to ease land transfer, thus freeing land for housing development (Abrams, 1964; Turner, 1967, 1969; and more recently Tipple, 1994). Drakakis-Smith (1988), however, reminds us that the low income households would still invest in housing even where formal tenure is absent so long as there is ample perception of security, family finances and broader political issues (Wegelin and Chantana, 1983; Zetter, 1984). Moreover, land in the developing world has a certain peculiarity that would impede such an exercise in formalising tenure. This is the so-called *native customary land*, i.e., land which are owned not by individuals but by the whole community and are mainly found in the rural areas and are of sizeable quantities. Lea (1983), for instance, has documented examples in New Guinea where land and house are owned by different owners, at least in the mind of the people. In Sarawak, native customary land and interior land (see Chapter Three) take up around two-thirds of the whole area of the State.

Urban areas generally do not have such problems with native customary land but have to contend with a different kind of communal ownership, and in this case land owned by institutions. Such lands, however, have not been totally withheld from housing for the low-income and have in fact

been well articulated in the informal housing market. Baross (1983) has identified 3 ways in which this is done, (1) non-commercial articulation, (2) commercial articulation and (3) administrative articulation.[3] Such articulations are, however, few and far in between. More often than not, land owned by institutions is left vacant for a hosts of different reasons. These are summarised as follows (adapted from Pacione, 1990:26):

1) Land is not available for current development.
   a) Land held for future use, e.g., public and private sector land banks and operational land of statutory undertakings.
   b Land held speculatively as a hedge against inflation, aided by low holding costs and income from temporary uses, e.g., car parking.
   c) Land whose development proposals conflicted with the state's development programmes, e.g., did not tally with the zoning plans.
2) Land is not in demand, due to:
   a) Physical constraints which make the site more costly to develop than a greenfield site, e.g., location, ground conditions.
   b) Land price does not reflect the potential user's valuation of the site.
   c) Uncertain future, e.g., if the site is blighted by future development proposals.
3) Land is in the process of redevelopment but implementation is delayed.
   a) Development deferred, e.g., lack of resources for housing or highway scheme.
   b) Design stage delays, e.g., problems between authorities and developers on proposals.
   c) Development procedure delays, e.g., site acquisition problems, resettlement.

Other than the issues described above, housing must also contend with other planning demands like urban open space and green belts. Where land is available for private ownership, legalisation can be delayed by operational bureaucracy and land registration can take years. In Malaysia, it can take as long as six years to convert, subdivide and issue titles to land (Drakakis-Smith, 1988; Malpezzi, 1988). In Peninsular Malaysia, the introduction of the "one-stop" agency has improved matters greatly although the Minister of Housing still laments that 'some projects take as long as two years to work their way through the various agencies to the point where we can approve them' (New Sunday Times, 17 October 1993). This "one-stop" agency, however, is

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3 In the first instance, usage of land does not involve any payment by the users to the owners and usage could either be legal or illegal occupation of the land involved. In the second, payments are involved in a legal arrangement between the two parties but these can be very complicated. The final method normally involves government land where squatters are legalised by transferring the ownership of this land to them.

only applicable for projects under the Special Low Cost Housing Programme (SLCHP)[4] and has not been implemented in Sarawak, where this study is based. The flexibility or inflexibility of the regulatory frameworks can, therefore, encourage or discourage producers' involvement in the market and consequently affects housing supply.

2.4.1 Housing Demand

Housing demand has been used widely as an explanatory approach in the study of housing. From this perspective, three main strands of investigations can be recognised, the neo-classical economic approach,[5] the ecological approach[6] and the behavioural approach[7] (Kirby, 1983). In all these approaches, householders' decisions were seen as the effects of the freedom of choice where they are free to choose where and what type of housing they wanted to live in. In order for these assumptions to perform, the housing market must be a perfectly formed market (see Section 2.4).

In this perfectly formed housing market, the objective of the housing consumers would be to obtain the best value out of their money, i.e., to obtain the house of the best quality at the cheapest price. This objective together with the need for housing generate housing demand. Housing demand, by its very nature, is infinite. Population explosion, rapid urbanisation, emergence of new households, changing social mores and increasing wealth have guaranteed that the demand for housing will forever be on the rise. Theoretically, therefore, the housing market is a supplier's market. However, this is not always the case due to the attributes of housing which create market imperfections on the supply side. Its durability, heterogeneity, locality - to name but a few - all play a role. The inability of supply to meet demand has created the classic market situation of too many chasing after too few, so much so that the price of houses has rocketed way beyond the ability of not just the low income group but most people.

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4 This SLCHP was launched in 1986 as part of the anti-recession measures designed to stimulate the growth of the economy during the recession period as well as to increase the supply of low-cost houses (Malaysia, 1991:364).

5 Theorises that households compete, within the constraints of their budgets, for space within the city, so as to maximise the satisfaction of the various competitors and the efficiency of the market system.

6 Widely applied in the 60s, hypothesises that households are subjected to the general laws of the organic world, most notably those of competition, dominance, invasion and succession (see Park, 1952: 119); their competition for space resulted in their segmentation into distinct spatial categories according to their ability to pay.

7 Focuses on households' decision to move to a new dwelling and the search for, and choice of, a new home.

Figure 2.3 - Components of Housing Needs

Component	Determining Factors
Upgrading Units	Quality of initial housing stock
New Construction:	
- New households	Population, Household size
- Reduce Overcrowding	Extent of overcrowding at start of period
- Replace non-upgradeable stock	Quality of initial housing stock
- Replace units withdrawn from stock	Durability of housing stock

Source: Struyk, R. (1988:2)

A consumer's decision to acquire housing normally depends on two factors, his needs (see Figure 2.3) and his demand[8]. Housing needs refer specifically to the household's wishes for a house, irrespective of whether it can or cannot afford to pay for it, and thus is very subjective and to an extent swayed by the household's tastes. Seen from a different angle, housing need can be understood as the substandard conditions of current housing when measured against socially acceptable standards (Cullingworth, 1960). Bourne (1981) says that, in practice, housing needs can be defined in several ways; such as in terms of affordability (based on income), suitability (based on dwelling size or design), or adequacy (state of repair). Demand is more impartial and is determined by the household's income, the proportion of this income it chooses to spend on housing and the price of the house. This demand, or ability to pay, determines not only the price, type and size of the house, but also its location. In the context of the low income groups, needs may so override demand that low income consumers end up purchasing houses which are way beyond their affordability.

To make matters more complex, demand for housing can be caused by different reasons. Some may want it for its *consumption* value while others may want it for its *investment* value. Again, distinction has to be made between *overt demand* and *latent demand* (Bourne, 1981). What is unanimous is that housing demand is very inelastic as far as income is concerned. In other words, the proportion of income people spend on housing is inversely related to the amount of income that they get. This means that people with lower income spend a higher percentage of their income on housing than those with higher income (Malpezzi *et al*, 1985: Mayo, 1993). The percentage again differs beyond territorial boundaries, for instance, Mayo (1993) finds that the average fraction of income spent on housing increases from 5 to 30 percent in countries with low levels of GNP per capita, before decreasing in countries with high GNP per capita.

8 Demand here is defined as needs backed by the ability to pay.

In housing studies, this measure is used widely to gauge *improvement demand*, i.e., changes in demand for housing consumption brought about by changing standards and expectations, and backed by the ability to pay. Nevertheless, among the low income group, housing demand is driven not so much by tastes or household size, but more by basic needs and the price of the house and their ability to pay for it. Even if they can afford to pay, because of their irregular and unsteady income, they are effectively cut off from the financial market. It is therefore fairly normal to find that the infinitely high level of housing demand from the low income is always high but never realised.

2.4.2 Housing Supply

As already previously stated, in an ideal housing market housing supply would respond positively to match housing demand. The fact that this is not so in most countries is due to the imperfections in the input side of the housing market. The elasticity of the supply of housing depends on a range of factors among which are the availability of resources, lands, infrastructure, building materials, the organisation of the construction industry, the availability of skilled and/or unskilled labour as well as the dependency on imported resources. The input market is so imperfect that ownership of these input factors are monopolised by a few who are then able to control prices.

The adoption of standards[9] too has a bearing on the ability of the supply to meet demand. The oft-argued standards issues only serve to prove that it is one of the sore points that decides whether houses could be built at a more affordable price. In most developing countries, standards adopted for low-cost houses are often inappropriate in two respects; firstly, they are foreign-based introduced by the then colonial governments; and secondly, these standards which may be acceptable for high cost houses were not modified to suit the needs of low cost houses. Thus, ultimately, the high standards applied are reflected in the prices of these low cost houses which consequently affect the supply of these houses.

One of the many ways adopted by many countries of the developing world to correct these imbalances between low cost housing demand and supply is for the government itself to become a housing supplier and intervene actively in the housing market. Nevertheless, where such an intervention has been attempted the problems of housing and homelessness remain critical. In

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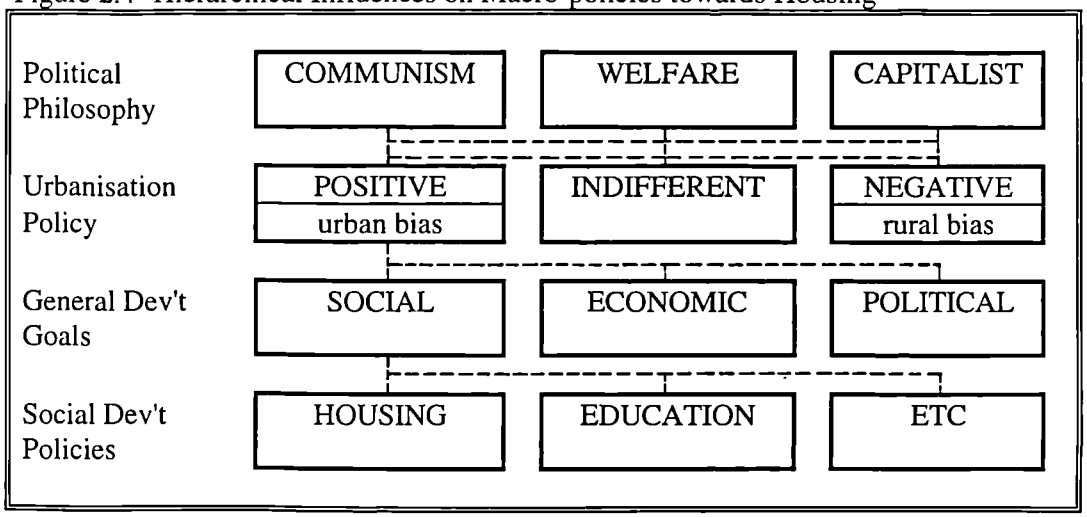
9 A standard is defined by the International Organization for Standardisation (ISO) as 'a technical specification or other rule based on consensus, approved by a recognized standardizing body for repeated or continuous application' (UNCHS, 1985)

general, academics agree that whatever approach is taken to tackle the housing problems, the ten explanations identified as causes for these problems, some of which have been briefly discussed above, must be directly addressed. These ten factors are substandardness; the needs of special groups; inequitable distribution of housing supply; the existence of the very poor; segregation and discrimination; obsolescence, under investment and deterioration; price escalation and affordability; financing subsidies and the distribution of benefits; supply problems, instability and concentration; and local market imperfections (Bourne, 1981).

Figure 2.4- Hierarchical Influences on Macro-policies towards Housing



Source: Drakakis-Smith (1988)

Households are, therefore, not really free to choose as previously described, and many are, in fact, constrained from such choices and ultimately end up in particular housing situations because of their positions in the housing market, 'and by the individual institutions (i.e., building societies, estate agents, public and private landlords) controlling the operation of particular housing systems' (Gray, 1975:230). Where choices are present, they are already pre-determined by those agencies responsible for the supply and allocation of resources (Kirby, 1983). In this respect, Mellor pointed out, as far back as 1973, that 'the housing market process can only be understood as part of the national allocation of resources, and not as the outcome of demand from individual household units' (1973:39). Such national allocations will again depend on the state's broad political philosophy, urbanisation policy, development policies and social development policies (Drakakis-Smith, 1988; see Figure 2.4). These national development policies will also determine where the low cost houses are going to be constructed. Stone (1978: 190) suggests that the allocation of finance 'exerts a decisive influence over who lives where, how much new housing gets built and whether neighbourhoods survive', while Wu (1979: 38-39) reasons that the concentration of public low cost housing in the urban centres are driven by a country's macro-

economic growth policies, its macro-economic and spatial strategies, its employment generation policies and its agropolitan[10] development strategies. To what extent these effects are actualised on the ground will of course depend on the economic climate. According to Murie *et al* (1976) the prevailing economic situation can exert as much influence on housing as variation in the way in which housing policy is implemented in different part of the country. Struyk (1988), however, suggests that the amount invested for housing will depend on the annual housing needs, the household's affordability, the cost of the housing solution as well as inflation (see the following Figure 2.5).

Figure 2.5 - Determinants of Housing Investment

Annual Housing Needs
Housing Investment Affordable by Household
- Income level and distribution at start period
- Real growth in household income over period
- 'Mortgage' terms
Cost of Minimum Acceptable Housing Solution
Inflation in Construction Costs over the Period

Source: Struyk (1988:4)

The influential effects that state intervention and the involvement by various institutions can bring about in the housing market has generated many studies adopting supply-based explanations, foremost of which is the managerial approach[11] which focuses on the factors affecting the supply of housing services.

2.5 STATE INTERVENTION

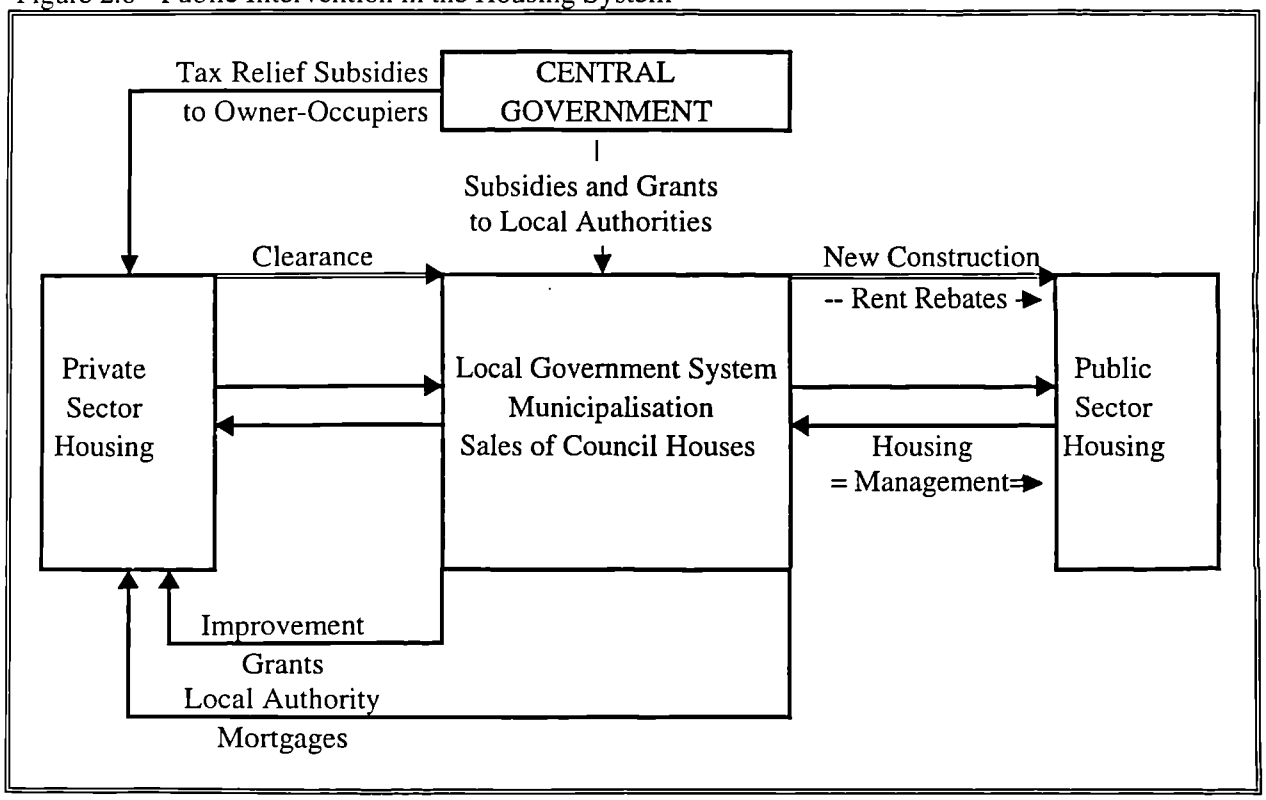
Most state intervention used to come in the form of the actual production of complete houses by *ad-hoc* agencies, the so-called provider-based strategy. Dissatisfaction with this approach has encouraged the growth of sites and services as well as the self-help housing initiated by Turner (1972, 1976) particularly over the last two decades and more, an approach also referred to as the

10 These are strategies that aim to, among other things, transform the countryside by introducing and adopting elements of urbanisation into special rural settings, extend the network of social interactions beyond the village, and reduce social dislocation in the course of urban development (Friedmann and Douglas, 1978).

11 This concentrates mainly on the 'gatekeepers' who control entry into the various housing sub-markets. They include estate agents, landlords, developers, financial institutions and the state and central governments (Harvey, 1973). It must be stressed that Pahl himself rejected the appoach and embraced a form of Corporatism (Pahl, 1977). Since these managers, or gatekeepers, make their decisions within the framework of the political economy, they are thus not independent of the system, but are extensions of it.

support-based strategy (UNCHS/ILO, 1995). However, they too are criticised or growing out of fashion altogether (Mathey, 1991) and in their place the World Bank's enabling strategy (1993) has gained popularity amongst many developing countries. If past experiences were to be any guide, it will not be long before this too would come under criticism. Part of the reasons for this is, again, the ideological strands of those involved in the arguments, the liberals and the Marxists. For example, the 60s and 70s were dominated by works related to the so-called dualist market distinguishing between the formal and the informal markets. Housing research then was focused on the problems and characteristics of squatter settlements spearheaded by people like John Turner (1967, 1969, 1972, 1976, 1978). There was also an active involvement by neo-Marxist writers who began to change the perception of housing in the wider economy. From then on incremental programmes to improve the quality and increase the quantity of housing was vehemently criticised and the state became a *cause célèbre* within the whole debate. Recently the trend has been toward an overall analysis of the built environment where the understanding of the various competitors over the limited resources is crucial to an understanding and application of the nature of the low cost housing market (Pacione, 1988).

Figure 2.6 - Public Intervention in the Housing System



Source: Bassett and Short (1980)

Such debates on state intervention in housing generally fall within two spheres, theory and practice. At the theoretical level, the arguments usually centre around the theory of the state. Why does the state intervene, who gains from this intervention, and who loses? The questions posited by Laswell (1958), Smith (1977) and Sanyal (1981) quoted earlier became the foci of interests. Of course, the fact that the poor and the low income households always end up the losers keeps the debate alive and interesting. At the lower practical level, arguments are made either to support or counter the approaches adopted by the state in its low cost housing intervention. Should the state build complete houses, encourage self-help, provide sites-and-services only or simply pursue an enabling strategy?

Theoretical debates are undoubtedly important. They help in the understanding of how the housing market works, why it works in a particular way, and even what goes on behind the market and whose interests the market players represent. However, other than providing a better insight into the normative side of things, they seldom alleviate the real problems faced by the poor, the low income and the homeless on the ground. For this reason, some analysts feel more comfortable with what they term a political economy approach, examining the process of housing provision within the institutional framework of the country being scrutinised. Pugh (1986), having reviewed and discussed the various conceptions in housing, concludes by saying that housing would reside in the context of political economy which recognises non-economic (interdisciplinary) matters as relevant, which retains a sense of history in explanations of economics, and which uses appropriate techniques to solve real world problems. While accepting that the housing situation in a country reflects the structural conditions in the society (see the structural strand of state theory), Pugh (1990) asserts that the reality of housing practice and the understanding of the housing problem also depend upon contingent conditions, the expression of policy, the characteristics of housing markets, the essentials of housing finance and the cultural conditions under which the state operates. Drakakis-Smith (1988), in the same vein, strongly suggests that a proper understanding of a country's political philosophy, its attitude toward urbanisation, its general developmental goals and how these are translated into its various sectoral development policies and programmes can provide a good explanation of its housing problems (see Section 2.4.2 and Figure 2.4). Expressed differently, housing policy development is influenced by the structural (e.g., status as a developing country, capitalist inequalities, federal pattern of government) and the contingent conditions of society (Pugh, 1986). Such comprehension within this context allows proposals to improve current approaches to be made without suggesting that the whole political and economic structures be dismantled. It has the added advantage of not compromising the neutrality of the professional analyst which will, on

the one hand, give his suggestions more weight while, on other hand, would probably make the state more open to accept, and hopefully, adopt them.

While most agree that state intervention in the housing market is necessary, it is the method of intervention that is under criticism. Instead of intervening to improve market performance by opening up the inputs market, most governments involve themselves in the actual production of houses. Most researchers disagree with the provider-based approach, although the World Bank (1980) feel it is acceptable depending on the strength of the economy, and suggest that any intervention should be in the inputs market (Malpezzi and Bell, 1991) or directed to the needy households and not the houses Klak (1991). Indeed Malpezzi, Tipple and Willis (1990) encourage any subsidy to be applied to the household. Bourne (1981) sees 5 negative repercussions in the wider housing market as a result of state intervention in the production of housing, and these are:

a shifting resources from private to public sector, without necessarily increasing the total resources available for housing;

b creating a large and costly bureaucracy;

c subsidising those who do not need it;

d reducing geographical mobility, perhaps adding to labour market imperfections;

e destroying the private rental sector.

Besides the above he identified other impacts which could also be felt particularly 'on the overall levels of prices and rents, on the choices open to consumers, on the kinds of social services required, and on real estate in general' (Bourne, 1981). Such impacts may arguably be acceptable if the intervention brings success, but on the whole the results have been neatly summed up by Mayo and Gross as follows:

> *'heavily subsidised blocks of public housing flats with high standards of construction and infrastructure, zoning and building code regulations discouraging production of lower standard housing ..... These policies did not work.'* (1987: 303)

Studies carried out in the U.K. focusing on the achievement of policies aimed at direct aid to areas of greatest housing need, mainly in the inner city, have found that it is the better off owner-occupiers who have benefited (Bassett and Short, 1978; Balchin, 1979). Even the contention that subsidised dwellings are net additions to the nation's housing stock has been empirically

disproved by Murray (1983). In his work he finds that 'most of the effect of subsidised starts on the housing stock was offset by the displacement of unsubsidised starts'. He posits that subsidised housing can displace unsubsidised units in two fundamental ways. One is by negatively affecting the demand for existing and new unsubsidised housing; and two by taking away the necessary resources from unsubsidised housing thus reducing the supply of new units from this source.

However, of particular interest to this study are the generic problems associated with the implementation agency's houses *vis-à-vis* the target population, i.e., how they relate to the problems of accessibility, habitability, sustainability and affordability. These are discussed within the context of the World Bank's RwG strategy of full cost-recovery, affordability and replicability by looking at the problems of target setting, issues on affordability and its related questions on subsidy, allocation process, housing standards, costs recovery, sustainability and replicability, and finally habitability.

2.5.1 Housing Agency

Government intervention in the housing market is normally driven, theoretically at least, by the need to rectify certain imbalances in the market which generally discriminate against the low income group. Since discrimination can easily be politicised, governments usually allocate these tasks to specially established public enterprises so as to be seen as impartial and neutral. Such independence, although limited only to the implementation of government formulated policy, can be questioned especially in the light of the findings of many studies already carried out. Sherwood (1970), for instance, disproves the fallacy that the popularity of public enterprises are due to their freedom from government influence. This was supported for Ghana by Kwaku (1977:12) who finds that one of the reasons why many government housing corporations have failed in the developing world is because of political interference and control. In an obvious case from Nigeria where board members were appointed on political patronage, the Chairman of one Corporation could not even distinguish between the 'office of the Corporation and those of his political party' (Odoji, 1969). Of a more direct relevance to the low income, Klak (1992b) finds that state agencies actually contribute to the exclusion of the poor from low income housing policy. Much more blatant is the example of a the state of Johore in Peninsular Malaysia, and it does not even implicate a state housing agency. This state requires that, 40 percent of all houses constructed by developers must be handed to it for allocation to supporters of the ruling party or parties in power.

Cases such as the above obviously raise the question of the even-handedness of these bureaucrats, or *gatekeepers* to use Pahl's terminology, in their role as housing allocators (Pahl, 1976). Managerialist proponents of the Marxist school, who saw these bureaucrats as urban managers, were not slow to see this enigma and rightly questioned instead on who managed these managers (Saunders, 1979) and how independent are they from politico-economic influences (Kirby, 1983). Rex and Moore (1967), on the other hand, following in the tradition of the Weberian approach, tried to comprehend housing allocation as a direct function of the class struggle that is inherent in capitalist societies. To put it in a nutshell, the low income group's access to the housing market and the credit market is not only determined by its variance in income and the predictability of its future incomes (Castells, 1975), but also by the so-called *gatekeepers*[12] who are supposed to be there to assist it in the first place.

2.5.2 Target Setting

The ILO Report of 1982 suggests that, in order to ensure that government policies and programmes are successfully implemented, the use of 'target setting' is essential. It defines target setting as,

> *' an administrative tool designed to aid in the execution of strategies ..... Targets are objectives, describing minimum levels ..... which government programmes and policies will help to attain'.* (Richards and Leonor, 1982).

Allied to this use of target setting is the use of 'target population' which is to eventually benefit from the 'target setting' and which, therefore, must be properly identified. In housing, this target population, or target group, is defined as *'that element of society which finds itself incapable of entering the formal housing market because of a basic lack of economic resources'* (Tym, 1984:210). This use of 'target setting' and 'target grouping' is considered necessary in programme effectiveness in order to ensure that the lower income section of society would feel the benefit of development as well.

In target identification for housing, two indicators are generally used, i.e., the absolute poor and the relative poor. The first are those living below an international poverty line of US$50 per capita per annum in rural areas and US$75 per capita per annum in urban areas, both at 1971 prices, while the second group comprises those whose incomes were less than a third of the national average per capita income (Burgess, 1992:80). Ravallion *et al* (1991) draw their

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12 See previous footnote.

international poverty line based on a bundle of reasonably well recognised goods as an absolute minimum. Anand (1977) set a poverty line for Malaysia as one half of the national per capita income or MR25 (US$10). The irony with all this exercise of identifying the target group for the projects is that, where post-project studies have been carried out in the Developing World, results have shown that most of those in the target group do not get access to the houses which were supposedly built for them (Burgess, 1987; Baross, 1984; Klak, 1992b; Skinner and Rodell, 1983 and Payne 1984). Balchin (1979), Bassett and Short (1978) and Bourne (1981) have reached similar conclusion in their work on the Developed World. This is particularly so in public housing allocation where, despite the social objectives of the implementing agency that are backed by a clear-cut set of criteria, housing programmes are almost always mistargeted. In an attempt to find out why there is still a gap between targets and achievement, the World Bank (1983) found that, among other things, the reasons were weak implementation capacity in Third World institutions, difficulty in recovering costs, and divergence between standards of provision and available resources. Klak is referring to the same 'weak implementation capacity of Third World institutions' when he says that it is the *over-determined system of causality* - state elitism, financial access to formal sector employees, dominance of the market, self-serving bureaucracy, to name but a few - which guarantees that the low income group will always be maginalised in the housing market (Klak,1992b).

2.5.3 Allocation Process

Figure 2.7- Similarities/Contrasts in Private/Public Housing Allocation

Index	Private market	Public sector
Principal objective	Efficiency	Equity
Criteria of efficiency	Minimising aggregate housing prices and rents	Maximising use of existing stock
	Maximising output and profits	Minimising administrative costs
	Maintaining rates of returns	Maintaining adequate stock
Criteria of equity	No one can move without making others worse off	Assuring adequate housing for all
	Price restricts over-consumption	Treating all equally according to needs
Process of allocation	Competition (ability to pay)	Needs and social position
Countervailing process	Collusion, Co-operation	Competition (among agencies and tenants)

Source: Bourne, (1981).

As illustrated by Figure 2.7, the type of, and the criteria used in, housing allocation depends on the type of market in which it operates (Bourne, 1981). In a private housing market, the houses which are produced for profit, are allocated by market mechanism whereby the income of the households and their willingness to pay determine who gets what, and where. In a public sector housing market, i.e., where the government intervenes, household needs theoretically supersede willingness to pay. Basically, the two underlying objectives in the allocation of housing in the public housing market are to provide housing to those in greatest need and to ensure equity. This differs with the objectives of the private housing market where the profit motive ranks high, although both markets would attempt to match demand and supply and achieve an equilibrium in the long run.

In practice, however, the needs of the households in the public sector are superseded by the use of affordability, not very much different from the private housing market, as the final criterion for eligibility. In other words, a household may meet all the other requirements asked for but will not be allocated the house if he fails to satisfy the affordabililty criteria, in this case the minimum rent to income ratio. The adoption of such rules penalises two groups of households. The first are households that have very low incomes (high rent to income ratios) but have a higher propensity to pay than average (high income per capita). The second are exactly the opposite where the households' rent to income ratios are acceptable but have low ability to pay because of low income per capita. In the words of Lee (1990: 70), 'the affordability criterion thus excludes from the projects families who should be included, and includes families who should be excluded'.

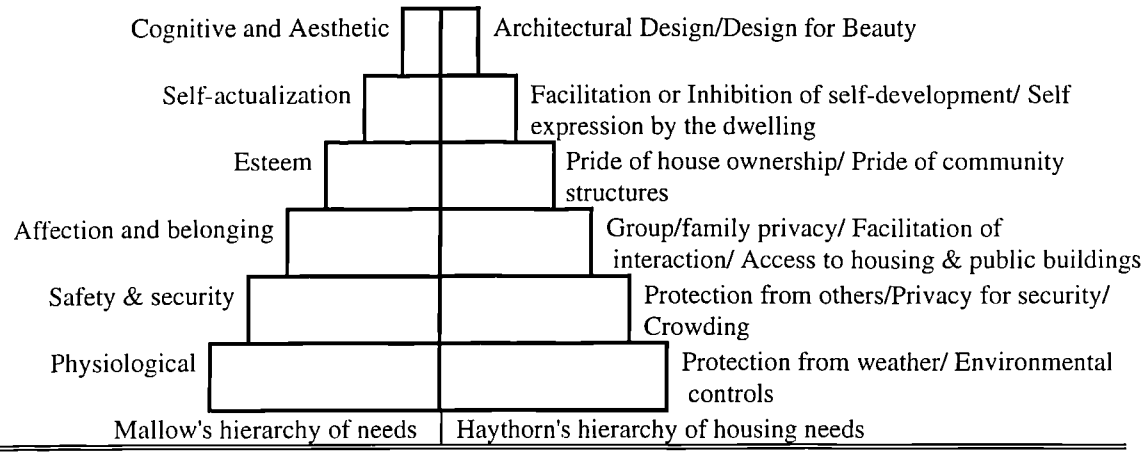
2.5.4 Housing Standards

Appropriate housing standards have been widely discussed in housing literature (Hardoy and Satterthwaite (1981), Mabogunje, Hardoy and Misra (1978), Payne (1984) Ramachandran (1972) and UN (1971)). According to Ramachandran (1972) the housing problem exists only because of housing standards where 'schemes which could lead to improvement of housing are unacceptable because they do not meet legal requirements' (Oram, 1979:42). The United Nations was more forthright when it said that housing standards are a problem not only because they are prevalent but also because they are being promoted in developing countries although they emanate from a bygone colonial era and represent an entirely different cultural and climatic background (U.N. 1971). King (1990) says that colonial governments imposition of standards in public housing was aimed at ensuring basic minimum standards for the local labour force and government employees, although in another vein he agrees that it is a means of incorporating labour into the

colonial economy. Whatever it was, the majority of the writers concede that, one way or another, due to the colonial influence, official standards are thus dependent on western technology, social philosophy, building materials and techniques.

Granted that many people in the developing world need decent housing, there are also many who already have decent shelters but still have a housing problem because of the housing standards adopted. As far as the majority of these people are concerned, the housing problem does not exist. It exists only in the minds of the professionals, the bureaucrats and the political opportunists who, unilaterally, impose the housing standards from above indirectly forcing the economically disadvantaged majority to adopt the same standards of life as they have. The gap between the officially adopted standards and the current conditions of most shelters can be very great, either implying that the official standards are unacceptably high or that the shelter conditions are unacceptably low. Nevertheless, a study among squatter settlers in Nairobi found that, in terms of priority, the need to improve their shelter to the required official standards only came ninth (Hake, 1977). It also demonstrates that among the low income group building will stop once basic shelter, at least to the same standards as those around them, has been satisfied. In Haythorn's hierarchy of housing needs (see the following figure), this is equivalent to fulfilling the lowest levels of needs only. Resources will from then on be used for food, clothing and opportunities to bring in extra income and it is only when these are satisfied that shelter improvements towards the official standards are attempted.

Figure 2.8: Hierarchy of Housing Needs



Source: Haythorn, (1970: 201).

In general, there are eight reasons why the use of standards are objectionable in developing countries, especially in relation to low cost housing and these are; they are irrelevant to local

culture, they are foreign to local building experience, they encourage over-exploitation of the limited local resources left, they are positively urban biased, they are too rigid and inflexible to be properly enforced, they are dependent on western technology, they increase costs, and finally they encourage the segregation of the poor and the rich (Mabogunje, Hardoy and Misra, 1978). Apart from being irrelevant, some of these also contribute directly to the problem of affordability, cost recovery and replicability of housing projects (van der Linden, 1986). Oram (1979: 44) suggests that standards should fulfil four basic requirements and nothing more. These four are:

a) shelter from the elements and intruders;
b) security from the dangers of fire and building collapse;
c) conditions which promote good health; and
d) adequate space and privacy.

2.5.5 Affordability

In any housing project, the affordability of the target population is a key factor in determining its success. It is so important that Meerman (1983) considers that the determination of the affordability of proposals is the most critical issue to be resolved during the course of designing a project. The meaning of affordability differs between different types of housing consumers. Generally it depends on three variables, namely income[13], housing costs and the propensity to consume housing, which are all difficult to define and measure (Tym, 1984). Struyk (1988), on the other hand, suggests that affordability is determined by changes in the share of income that households devote to housing expenditure, changes in mortgage interest rates and changes in the cost of different housing solutions, which also determine the amount of subsidies that the state inject in any housing project. In practice, affordability is usually related to regular income as financial institutions only allow this as a basis to grant loans. Some writers suggest that more precise indications of income can often be obtained from expenditure surveys. Others, however, feel that proper expenditure surveys are very expensive to mount, and even if they are readily

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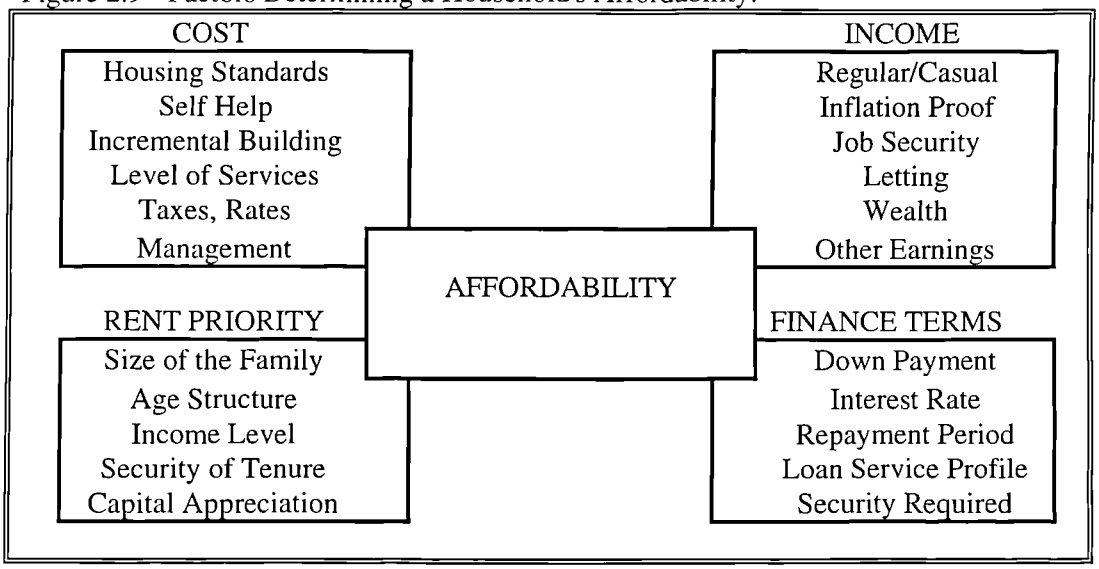
13 Shefer (1990) says that the concept of income has never been clear. This vagueness has led to researchers using different definitions and bases to calculate a household's income. In its most demanding form, Titmuss (1962) says that the concept must embrace all receipts which increase an individual's command over the use of society's scarce resources, which was repackaged by Harvey (1973) as 'real income', i.e., the net effect of positive externalities (price of accessibility to the desired and necessary urban facilities) and negative externalities (the costs of proximity to these facilities). Some, like Shefer himself, have used household expenditure as a proxy for household income, while others used household income to include all incomes including salaried incomes, cash incomes from other sources as well as incomes in kind. The household income for this study solely refers to salaried incomes and the reason for this choice is discussed elsewhere.

available they are normally of different coverage and irrelevant to the housing research in question.

This income figure becomes more debatable when supplementary incomes by other members of the household have to be taken into account, or even if the head of household himself is self-employed. While some may shrug off the importance played by supplementary incomes in the well-being of a household, studies have found that such earnings can amount to the payments required for a site-and services project (Tym, 1984). As if this is not enough, Datta and Meerman (1980), suggest that household per capita income (HPY) is a better measure than household income when looking at household affordability, and quote Kuznets in their arguments, who says

> *'it makes little sense to talk about inequality in the distribution of income among families or household by income per family or household when the underlying units differ so much in size ... before any analysis can be undertaken, size distributions of families or households by income per family or household must be converted to distributions of persons (or consumer equivalents) by size of family or household income per person (or per consumer)'*, (Kuznets 1976: 87)

Figure 2.9 - Factors Determining a Household's Affordability.



Source: Parry and Gordon (1987)

Figure 2.9 summarises the general factors influencing affordability. In any housing project, especially one designed for low income earners, the problem of affordability is central to its success, especially so when a complete cost recovery is hoped for. However, affordability, the proportion of income a household is able and willing to pay (Shefer, 1990), is hard to quantify

even in cases where a complete set of data on income and expenditure is available. This ability and willingness to pay depend on several factors. In the case of the former these factors are fairly objective while in the latter they can be very subjective.

Ability to pay can be looked at from two aspects, the rent-income ratio (RI) and the price-income ratio (PI), both of which act as the main indicators of affordability and, according to the United Nations (1993) can also explain the nature and efficiency of a country's housing market. For instance, a well functioning housing market should result in a low rent-income ratio indicating a responsive supply of housing. In a highly inelastic housing market the failure of housing supply to meet demand not only results in a high rent-income ratio but also lower housing quality. On the other hand, a low value ratio can also be a reflection of the widespread application of rent-control measures that result in below-market rents, which in itself may be enticing but which will also result in depressing the rate of housing production (World Bank, 1993).

A local notion of housing affordability is generally set at a given maximum proportion of a household's income, or the rent-income ratio, and differ between countries. Generally, the rent-income ratio should be low in low income countries rising to a peak in middle income countries. This fixation that a household, rich or poor and in any geographical location, would spend a standard proportion of their income on housing has its origin in Engel's Law of Rent - 1857, i.e., a householder's expenditure on housing was roughly *a constant proportion* of his income. However, little discussion is found in early literature regarding these magic figures although the United States had in the thirties adopted the principle that a month's expenditure on housing should not exceed a week's pay. This practice was generally adopted in the sixties and seventies where the ratio of 0.25 rule became embedded in housing calculations on a buyer's affordability (USPWA, 1936), although different writers suggest different levels of house cost (rent) to income ratio. Grimes (1976), for example, suggests the figure of 0.15 while Landeau (1987) suggests a traditional ratio of 0.4, plus or minus 0.05 points. Nevertheless, the levels are set at 0.25 percent in Korea, the Philippines and Tunisia; 0.28 in the United States; 0.3 in Jordan; 0.33 in the Ivory Coast; 0.34 in Indonesia; and 0.4 in Portugal (Landeau, 1987). In Zimbabwe the level is fixed at 0.275 while in Malaysia it is the same as in the Ivory Coast, i.e., 0.33. In his study, Landeau concludes that, for Tunisia at least, the rent-income ratio should be increased from 0.25 to 0.35.

The reality is, of course, very different as the economic situation is more complex especially so at the lower end of the income scale. Not only do households consume different proportions of their income on housing, the poor also tend to put a higher proportion than the better off.

Studies have confirmed this where, with the sole exception of Shefer's (1990), a higher proportion of income is spent by the poor on housing than do high income households and that the proportion of income spent on housing for all households increases with the level of economic development (Mayo, 1985). The same is true when observed across cities where the proportion spent on housing actually increases with mean income in the city (Mayo and Gross, 1987; Kuznets, 1961). On the other hand, the opposite is true with urban low income households within cities where the proportion that can be reserved for housing is much smaller than that of the economically better off (Tym, 1984; Mayo and Gross, 1987). It must however be noted that in cases of extreme poverty where the need to maintain life is paramount the expenditure on housing is naturally very low.

This variation in rent-income ratios was confirmed by Laquian (1983) and Mayo (1993) who discuss ratios ranging from 0.08 to 0.5 and 0.25 to 0.6 respectively. UNCHS (1993), on the other hand, in its study of shelter sector performance indicators on 52 countries, has reported rent-income ratios ranging from 0.03 to 0.48 with a median of 0.18. In East Asia the ratio was found to be 0.2. Such variations are to be expected as the actual amount that a household can afford to put aside for housing is a function 'firstly of the amount of household or family income' (Tym, 1984:211). Besides this, varying consumption behaviour shown by different economic groups and geographical differences can also influence the rent-income ratio levels. Thus, a household living in an extreme climatic conditions would spend more of its income while another living in a relatively safe and comfortable region would not. The dependence and sweeping application of these fixed figures have, therefore, been widely criticised by those, notably the United Nations (1978), who stress that households are not homogenous especially when it comes to incomes and expenditure (Kuznets, 1976; Datta and Meerman, 1980; Tym, 1984; Mayo and Gross, 1987).

Part of the reason for adopting these standard fixed levels is the dearth of empirical data on owner-occupiers' behaviour on housing expenditure. Studies on housing affordability - especially in the Third World - have always leant heavily on tenants' behaviour as a proxy for houseowners' behaviour (Keare and Jimenez, 1983; Malpezzi, Mayo and Gross, 1987), which are themselves limited to those countries where statistical data is available. This brings up the validity of the assumption since tenants and owners behave differently when it comes to behavioural housing consumption; Landeau (1987) proffers that different analytical approaches

should be used for each.[14] This makes sense since such affordability indices do not distinguish between those who have chosen to and those who are forced to pay that amount. Although some chose to spend less than permitted by such standards, most house owners are willing to pay more than the housing establishments are ready to admit and that if such figures used by the authorities were based on studies using tenants as proxy then they are essentially erroneous.

Nevertheless, the rent-income ratio has become the standard measure to calculate a household's affordability because of the impossibility of getting accurate data on a buyer's ability to come up with the down-payment, as well as its widespread adoption by lending institutions. In reaching their decisions the credit worthiness of the applicant (based on rent-income ratio) and the sales potential of the property are crucial; both of which are biased against certain types of households and property. Essentially, the lending policies of financial institutions are biased against 'low income households and households headed by manual workers (Kirby, 1983: 31). In cases where low income households succeeded in getting loans, high interests force some of them to 'take in lodgers to help meet the repayments and/or will have little money to spend on house repairs (Bassett and Short, 1980: 81).

Various ways have been suggested in order to improve affordability, most of them focused at narrowing the gap between the house prices and the people's ability to pay. These range from those calling for a provision of rental units to enable owners to earn extra income (Gilbert and Ward, 1984; England and Alnwick, 1982; Soni, 1981; and Turner, 1976), reduction in standards in order to lower construction costs (World Bank, 1993), creation of savings and credit associations to increase access by the poor to the financial market, which can then be used to finance housing construction (Altmann, 1982; Rodell, 1990; Wegener, 1982), and redefining the problem as one of unwillingness to pay rather than inability to pay and coupled with a reduction of government intervention (Keare and Jimenez, 1983; Malpezzi, Mayo and Gross, 1985). Remarkable though they may be, these can only be successfully implemented within acceptable local practice and where they concur care must be taken so as to ensure that no untoward effect would result. For instance, house owners may not be pleased to have renters as in Pakistan (van der Linden, 1987), or reduction in standards may lead undercutting of certain minimum standards

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14 Housing consumption by house owners is a deliberate investment in a real asset (thus requiring substantial savings efforts) while housing consumption by tenants is merely payment of a service. Landeau (1987) therefore suggests that for the latter, traditional economic consumption theories are applicable as opposed to the former where the portfolio management approach is more relevant.

as Cabannes (1983) and Ludwig and Cheema (1987) have found in Madras and Indonesia respectively.

Willingness to pay, on the other hand, depends on the value placed on the house (security of title, its marketability and so on) and its price. A household may be well able to afford the house but may not be willing to pay for reasons like unsuitability to their needs or not meeting their expectations. On the other hand, a household who may not be able to afford one, would be willing to pay more if it gives him security, act as an investment and can be used like any monetary assets. Willingness to pay can also depend on the consumers' perception of the house, especially public low-cost housing. There is this general belief that being publicly supplied these houses are gifts from the government (Klak, 1992a) and can disastrously affect their willingness to pay especially where political clientelism is rife. This willingness to pay, and not the ability to pay, would determine whether capital costs could be recovered which consequently would determine whether funds could be generated to sustain and replicate the projects.

The importance of affordability is such that housing problems can arise solely due to the misunderstanding of or confusion to its meaning which, put simply, 'describes the extent to which households can afford to pay for housing'.

2.5.6 Housing Subsidy

With very few exceptions, all governments provide housing subsidies in one form or another. The term subsidy often conjures a negative image both among the recipients and the provider. To the recipients, to receive subsidy implies that they are not able to improve their lot and often encourage a dependency syndrome among them (Sanyal, 1981). To the provider, it is sometimes seen as a tool for dynasty building, especially among public enterprises, through political clientelism and patrimonialism. On the wider scale, subsidies can distort the market that lead to unproductive and ineffective use of public money. Worse still, as public funds are limited, subsidy can also deprive other sectors of the allocation that they so badly need.

Why then do government provide subsidies, in this case housing subsidies? One of the main reasons is the high standards which, without subsidies, would put these houses beyond the reach of the targeted households (Mayo and Gross, 1987). The high incidence of homelessness and poor housing in many developing countries makes housing subsidies not only desirable but even necessary if every household is to be adequately sheltered. On the wider subsidy provided to

government employees housing, the reasons could range from 'colonial influence to the existing structure of the political economy' (Sanyal, 1981: 437).

Housing subsidies appear in many different forms, direct or indirect. The most obvious, and most often talked about, is direct housing subsidy in the form of public low cost housing for the low income groups, which may take the form of serviced plots or core houses or even completed houses.[15] Much debate has been going on, especially in the less developed countries, regarding its effectiveness. UNCHS (1989) identifies three constraints working against this approach which are,

a public land is limited in most urban centres, pushing publicly sponsored low-income settlements away from the centres of employment, particularly self-employment in informal activities;

b low-income households are frequently not able to afford the construction of a stipulated quality of house and lose control of the building plot;

c in spite of a restriction on sale imposed on allocated plots, large numbers of plots change hands within a few years. This enables the beneficiary to realise a substantial profit but

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15 It has also been highlighted in UNCHS (1989) that in the Netherlands there has evolved a different form of subsidy known as *equity participation* which is similar to the widely used system among some Islamic countries in an effort to avoid the problem of interests. Various types exist in the Islamic practice the most popular of which are *al Mudharabah* (Trustee Profit Sharing), *al Mushakarah* (Venture Profit Sharing), *al-Bai Bithaman Ajil* (deferred sale) and *bai al-istisna'* (sale on order). The deferred sale is similar to the instalment payment as practised by the banking industry in the West, leading to calls that it is just interest under a different title. By this method, the Bank will first evaluates the requirements of the applicant normally in terms of his affordability, i.e., the size and number of payments. It will then purchase the house which is subsequently sold to the applicant at an agreed price based on 1) the bank's actual investment in the house and 2) its profit margin which would meet the size and number of payments as agreed by the applicant. Thus a bank will buy a house and lease it to a customer for an agreed length of time, after which the customer takes ownership. The MSI Finance Corporation in the United States, one of the growing number of financial institutions that adopt Islamic principles, works in a slightly different manner. The buyer forks out a fifth of the property's price while the rest is paid by the MSI in a partnership agreement. The buyer who is now referred to as the resident pays rent of the value of this property which is owned by MSI, plus a little more to increase his equity. Overtime, as in standard mortgages, the portion owned by the resident rises corresponding to the decrease in MSI's share. The only difference is that the value of the property is reassessed annually and rent is adjusted according to the new value. In a situation where the value increases, the rent will also increase which will dilute the resident's equity though he actually loses none of his invested money. In cases where he defaults, the institution will sell the property, and the proceeds will be split according to their shares thus guaranteeing the safety of the equity of both partners. In well run institutions, such practices can be made to work properly and even help financial instruments more market driven (World Bank (1990: 70)).

> is counter to the purpose of the subsidy, that is, to enable poor households to acquire a decent dwelling. (UNCHS, 1989:23).

It has been pointed out earlier that empirical studies have documented that public housing in the developing world, which normally involves subsidies, are not only costly because of the subsidy element but is also wrongly targeted, and this applies to all countries of all political shades. The same is also true in the developed world where, in the case of the United States, for instance, an advanced capitalist country which practises a liberal economy, less than 3 percent of households received direct housing subsidy, and worse, among the poorest income groups, less than 7 percent benefited directly from them (Bourne, 1981: 211). However, the amount most governments spent on direct subsidy is minuscule compared to the amount spent on indirect subsidies - low interest rates and tax relief to households of above average incomes. Bourne also finds that in the United States housing subsidies have

> *'both an impact which is in total limited and a distribution which has not been of pronounced benefit to the very poorest'* (Bourne, 1981: 211).

In a study of six developing countries, Grimes (1976) finds that between a third and two thirds of the urban dwellers could not afford the least expensive public housing available. In his study on housing subsidies in Zambia, then a developing socialist state, Sanyal concludes that 'housing subsidies clearly do not help to deliver social justice'. More than that, he also claims that housing subsidy 'skews the distribution of income further by adding to the growing income gap between households within the urban area' as well as failing to 'correct existing "imperfection" within the housing market' (Sanyal, 1981). Most ironic of all is his assertion that when the money dries up the less privileged are told that self-help housing should be adopted when the decision makers continue to enjoy housing subsidies that account for as much as 50 percent of their monthly income.

Similarly, Malaysia, which is a developing peripheral capitalist state, spends a great deal in the provision of low cost housing for low income households but as much, if not more, is used to subsidise government servants in the form of low interest housing loans.[16] This, however, may

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16 The actual amount of subsidy is hard to quantify as no studies are known to have been conducted. All public sector employees, irrespective of positions and/or incomes, are entitled to a subsidised government housing loan (at 4 percent interest), and on top of this high ranking government officers are also paid 'housing allowances', at least 10 percent of their monthly salary. The more senior the officer, the bigger the loan (interest fixed at 4 percent) and the higher the housing allowance. A government employed wife is entitled to the same benefit as her working husband. In all the past 5 Year Plans, allocation for low cost housing has never exceeded 50 percent of the

not be evidently clear as such assistance is not necessarily categorised as housing subsidy. Only assistance given to the low income and the poor are termed as such, but in so far as similar assistance is given to the upper and middle class employed by the government, it is looked on as incentives and fringe benefits. This conforms to the findings of studies done by Winpenny (1982) and Sanyal (1981) where such subsidies are found to be substantial, limited to government employees and highly regressive. Putting aside this deliberate targeting of government employees, the allocation of the low cost houses too is found to be flawed, i.e., the majority of those who succeeded in getting into these houses are ineligible households. Seen from this angle, the low income households are actually getting a raw deal. Not only does much of the money for housing go to subsidise those in public employment, including the well off, but also most of the low cost houses built with whatever is left from this budget also go to the better off.

While the pros and cons of this subsidy will continue to be debated most governments will proceed to implement it as necessary. Even when times are hard, other expenditures may be cut or controlled, but subsidies for housing will continue to be provided. If any cuts are to be made at all, it is the housing allocation for the low income which is going to suffer and not those for the middle and upper classes (Sanyal, 1981). Whatever the reasons, it is housing subsidy for the low income which has always received the brunt of either government cuts or housing researchers critical examination. This is ironic in that, between the two, housing incentives benefit the well off more than the needy.

The vague nature of financial allocation given to various sectors and the influences of macro-policies (see Section 2.4.2 and Figure 2.4) compound matters in the less developed world. In such a situation, the level of financial allocation for various sectoral developments depend not on rational bases but more on national pride and prestige, or in some cases on the usual national security, i.e., for the purpose of entrenching those already in power. There is an urgent need, therefore, to identify how much money should go where and for what type of houses. The system practised in the United Kingdom makes use of such criteria as the GNI (Generalised Needs Indicators) and the HIP (Housing Investment Programmes), (HMSO, 1992) Although the decision is based on the discretion of the Department of the Environment the accepted format guarantees that every regional or local authority plays by the standard rule where everyone is treated as equal.

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total housing allocation; 43, 32, 42, 50 and 21 percents respectively in the 2nd, 3rd, 4th, 5th and 6th Plans (see Chapter Three).

However, it is not only the low income group who are negatively affected by housing subsidy, although they may be the hardest hit, since subsidised housing can also cause serious repercussions on the wider housing market (see Section 2.5). Private developers and builders see subsidies as a disincentive to competition and as a result they tend to supplying the upper end of the market. When such a situation crops up, they (the private sector) is often wrongly seen as incapable of or uninterested in supplying housing for middle or lower income families. This situation was observed in Peninsular Malaysia by Wong (1986), who said that the middle income households were squeezed out of the market because developers were only concentrating on building high-cost and low-cost houses[17]. In such a situation, middle-income households have to compete with the low-incomes households for low-income houses, putting more pressure on the already limited supply.

Thus it seems that any attempt to subsidise housing projects can only be counterproductive to the lofty aims of helping the target group. Due to limited resources, it is only sustainable if full recovery is achieved and that it is accessible to low income households only if it is affordable to the target population and the eligibility criteria is properly followed (Lee, 1985). In fact, a programme that does away with subsidy and exploits the beneficiaries' own resources could reach a wider target population (Richards and Leonor, 1982). Such beliefs are supported by other writers (for instance, Rodell, 1990) who believes that subsidies are generally not needed and that it is possible to provide decent housing to the majority of the homeless at affordable prices.

Struyk suggests that subsidies are very responsive to three factors, and these are:

a) design standards for minimally acceptable units;
b) reducing household mortgage interest rates through macro economic policy; and
c) increasing the share of income devoted to housing by those who would receive the subsidies (1988:5).

Of these three, the first is the most readily available at government's disposal but tends to be the last to be changed.

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17 By law, private developers are required to put aside at least a third of the total housing units for low-cost houses. The provision of low-cost houses is possible through the use of cross-subsidy and, in order to maximise their profit margins within this contraint most go for a mixed development between high-costs and low-costs, with medium-costs interspered in-between, more often than not to physically separate the two.

2.5.7 Habitability

It has been shown above that the level of subsidy provided in housing is directly influenced by the standards used (Mayo and Gross, 1987). There are two contradictory effects of this, one desirable and the other not. The latter, which is the high cost of the houses, has been the direct cause of high subsidies, injected to make the houses affordable to the beneficiaries. This effect has been widely discussed and documented and is seen as one of the main causes for the failure of low cost housing projects. The former, which is the high quality of public housing, has attracted less attention except by a few researchers (for instance, Carmon (1992)), probably because it has resulted in less controversy. If beneficiaries of public housing are to complain it is generally about the smallness of the rooms of the houses (Carmon, 1992).

2.5.8 Sustainability of the projects

The sustainability of any project depends on the scale and speed of cost recovery. In low cost housing, the huge amount of subsidy injected makes it imperative that full cost recovery - this includes effects of inflationary pressures and interest charges - is achieved in order to guarantee replicability of projects. However, subsidised housing projects are sold at less than the full production costs of the houses, thus guaranteeing long before the start of any project that full recovery is not possible. There is even no warranty that the actual amount that needs to be recovered from the target group can be fully reclaimed. The effect is thus to dwindle the amount of cash available for future projects while at the same time reducing the number of beneficiaries that could profit from such ventures. This need to ensure that cost recovery is fully achieved has also been quoted as a reason that leads to the poor being purposely excluded from the projects (Ludwig and Cheema, 1987; Ramirez and Burgess, 1988).

The level of cost recovery depends of course on two factors, i.e., the ability to pay and the willingness to pay. The ability to pay has a direct linkage with the affordability level of the household. If the household can afford it then theoretically there is no problem with cost recovery. In cases where the beneficiaries are willing and able to pay, the loan repayment periods will determine how much and how fast the initial capital layout can be recovered and recycled. Naturally, the shorter the periods are the better it is. Nevertheless, it is not always as straightforward as this, since households with the affordability level may not, and do not, pay up for varying reasons. While there are many commonly held perceptions as to why people do not pay they do not necessarily hold true. Klak (1992a) in his study on Jamaica found that of the

seven widely held perceptions[18] of causes of arrears, five were proven to be wrong. Interestingly none of the likely causes, for instance, low income and high price-income ratio, were true. The main cause that he uncovered was that a 'government gift' attitude causes arrears. The implication of such a finding on public housing is obvious since most beneficiaries do associate such houses, especially due to the subsidy input, as 'government gifts'.

The study carried out by Mayo and Gross (1987) concluded that housing subsidies 'are simply too high to permit large scale replication of projects'.[19] This finding is supported by Peattie (1987) who says that between one-third and two-thirds of the inhabitants of the developing world could not afford to pay for the programmes carried out by the World Bank. A more worrying development is the findings of some studies which find that the stress on full-cost recovery in order to facilitate replicability has led to the targeted groups being neglected, shifting the target from the poor to the lower middle classes (Ludwig and Cheema, 1987: 222; Ramirez and Burgess, 1988).

2.5.9 The Enabling Strategy - A Panacea?

In the face of the problems of state intervention outlined above various alternatives have been proposed ranging from complete absolution by the state from direct housing production to letting the homeless take up the responsibility themselves in the form of self-help housing. The basis of most of these approaches is the total exclusion of the state from the market, which in reality is not possible, due to the far reaching tentacles of politics and the omnipresence of economics. Self-help housing, for instance, which enobles man's resilience and endeavour has been proven to be wanting and suffers from the very same problem it is supposed to avoid (Mathey, 1991). Similar critical conclusions have been reached by many other researchers, and among the most recent is Tipple (1994), who goes farther than most by suggesting that the job of building houses should is best done by professional house builders, basing his argument partly on the time consuming acquisition of skill for self-help construction which is, more likely than not, used only once in the individual's life time.

Tipple's proposals may be controversial for many, but are economically sound. So long as the state does not leave the market totally on its own, but intervenes rationally to ensure efficiency

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18 Household poverty, 'government gift' attitude, male headed household, large loan to income ratio, has no initial equity to lose, no legal threat of eviction and escalating instalments (Klak, 1992a).

19 In World Bank sites and services projects they found that the median subsidy for all was about 62 percent of total resource cost.

and assist the poorer section of the society, such proposals which unashamedly embrace realism are always called for. The World Bank's (1993) enabling strategy falls very much in this vein as it takes into account both realism and idealism; two factors which have to be seen as complementary and not necessarily contradictory to each other, as many do. In this respect, the World Bank's seven identified instruments which focus on property rights, mortgage finance, subsidies, infrastructure provision, land and associated regulations, building materials and institutional framework have been suggested as tools which can be applied selectively, singly or in association with each other, in practically any country of whatever political persuasion or level of economic growth. This flexibility may yet be its most powerful strength, considering that most, if not all the seven instruments that it identifies, have, at one time or another, been proposed before.

The basic concept of the enabling shelter policy is the removal of obstacles that have been strangling housing supply. The GSS document of 1991 (UNCHS,1991) specifically highlights four activities that should be pursued and these are:

1 to facilitate/encourage action taken by other sectors using public sector resources;

2 to stimulate the use of untapped capacities of resources;

3 to define complementary roles of the public and private sector in the most efficient way possible;

4 to concentrate public sector activities in areas not provided by other sectors.

In many ways, the enabling strategy proposed by the World Bank have much in common with that of Turner. They both look at housing as a process for development and a source of employment and reject it as simply an object and an end in itself. Similarly both accept that housing problems have their roots in institutional structures and that conventional approaches do not work, although the World Bank suggests that such approaches can still be useful depending on the types of market involved and that more responsibility should be given to the private sector.

2.6 SUMMARY

It has been shown above that the effects of direct government intervention in housing have not been, and seemingly will never be very encouraging. Various inter-related problems associated with it must be solved before such intervention can be adopted. Central to these issues seem to be the inaccessibility of available land to the low income households and the insistence on

applying high irrelevant standards which requires government subsidies to bring the price down. In many cases, even with these subsidies, the majority of the low income group failed to get into these houses either because of the allocation process where clientelism and paternalism comes into play, or because they have no access to the credit market, or simply because they cannot afford the houses. While this approach has not been completely discredited, these very reasons have led the World Bank to shift its focus to the 'enabling strategy' from this 'Redistribution with Growth' strategy.

CHAPTER THREE

CHAPTER THREE

CONTEXTUALIZATION OF THE ISSUES

3.0 INTRODUCTION

As with other developing countries, Malaysia in general and Sarawak in particular is finding it difficult to adequately shelter its poor population. The natural increase in population, the rise in rural-urban migration[1], the quality of the housing stock, overcrowding and also poor provision of basic amenities have been often-repeated as the reasons for this failure. The real reasons, however, are more portentous. These include the supply of the wrong types of houses, the poor performance of the public sector[2] and the drastic increase in house prices[3]. Developers were building houses not for the majority who did not have houses but for those wanting a second, or even a third, luxurious house; or worse still, to respond to those who simply enter the housing market purely as speculators[4]. Whatever the reasons are, the housing problems in Malaysia are 'symptomatic of broad socio-economic processes operating at various societal levels (Johnston, 1979). Thus, to comprehend the nature of these problems it is necessary to grasp the political and economic conditions of the country.

Sarawak's position in any discussion on Malaysian issues, and this includes housing, should be clarified. Most literature on Malaysia actually exclude the state and its sister state of Sabah, either by accident but more likely by design. The different social, ethnic and political

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1 Some studies however claim that its effect on urban population is negligible due to government rural development programmes.

2 For instance, none of the national plans have succeeded in achieving their targeted output of low cost houses. Except for the First Malaysia Plan (66-70) which managed to fulfil around 80 % of its target the rest delivered between 10 to 30 % of the target.

3 The Consumer Association of Penang estimated that between 1970-1980, urban house prices soared by 200-400% which was two to four times more than the 96% rise in the Consumer Price Index. This continued till the middle of 1980s when it began to level out and finally fell due to the recession.

4 For instance, at the height of the property market slump in mid-1986, out of an estimated MR8-MR10 billion worth of properties that remained unsold or unoccupied, MR3.5-MR4.5 billion were residential properties. On the other hand, it was also estimated that in 1980 almost half-a-million squatters were living in the capital city and its surrounds, while squatters formed a quarter (50,000) and a fifth (60,000) of the populations of Johor Baru and Ipoh respectively (Khor, 1989:10).

backgrounds of the two sometimes make it easier for researchers simply to ignore them completely. There are other reasons too. The physical distance, the higher costs needed as well as the difficulty in obtaining up to date information that tally or are comparable to those in the Peninsula are some that can pose real obstacles. For this chapter, general matters that are significant to Sarawak will either be highlighted accordingly or covered in section 3.5 on the State.

3.1 THE SOCIAL CONTEXT

There is very little written record on the process of urbanisation of pre-independent Malaysia. The oldest settlement mentioned, which dates back to the fifth or sixth century, is in the north of the Peninsula and located in the southern part of present day state of Kedah (Lim, 1978: 9). The more famous entreport of Melaka (Malacca) which lies to the south-west was established much later, sometimes in the fifteenth century. Since both these settlements failed to generate an indigenous urban system (Lim, 1978: 22), most literature on urbanisation in Malaysia begins with the growth of the Straits Settlements of Penang and Singapore as well as the mining towns of Ipoh and Kuala Lumpur during the British colonial period (Hirschman, 1976; and Salih and Young, 1981).

Unlike most third world countries, urbanisation in Malaysia does not follow industrialisation as normally but is very much influenced by socio-political factors (Ghani, 1991). Pre-independent growth was due to the importation of labour to work the mines and the plantations especially in the western belt of the Peninsula. Growth after independence, on the other hand, was mainly due to the creation of New Villages as part of the resettlement programme necessitated by the 'Emergency'[5]. More recently, growth was mostly due to a conscious effort on the government to urbanise the Malays as part of it New Economic Policy. The effects of this policy, part of which is to implement rural development programmes, has greatly diffused the impact of rural-urban migration. Ghani (1991), for instance, claims that rural-urban migration is not a determining factor in urban population growth in Malaysia but natural population growth is.

The legacy of importing immigrant workers is reflected in the ethnic composition of present day population distribution. The Chinese are mainly found along the western part of the Peninsula

5 This was implemented by the Colonial Government where the Chinese population was placed in these new villages in order to cut off support to the Communist guerrillas (the majority of whom were of Chinese descent) and at the same time to protect them from being harassed by these guerrillas who would usually demand food and other basic materials.

and in the major towns, while the Malays have consistently remained in the rural areas and along the eastern part of the Peninsula. This geographic and economic distinction between Malays and Chinese has been used as the main basis of the post-1969 New Economic Policy which has a dual aim of alleviating poverty and restructuring society. The second objective has had a negative impact on Sarawak as it does not display the same ethnic distribution and problem as the Peninsula. Besides lacking a high proportion of Malay population, it also is very rural in character and thus loses out on the incentives given to help out the poor Malay population.

Table 3.1 - Population, Urban Population and Growth Rate, 80-91

		Kuching	Sarawak	Peninsula	Malaysia
Area (km. sq.)		1,900	125,000	132,000	330,000
Population (000)	1980	264	1,235	11,427	13,136
	1991	368	1,648	14,128	17,567
Population Growth	70-80	na	2.4	2.3	2.3
(% p.a.)	80-91	2.8	2.6	2.4	2.6
Urban Population	1980		223	4,304	4,753
('000)	1991		638.6	8,617	9,234
Urbanisation Rate	70-80		1.8	na	3.8
(% p.a.)	80-91		6.5	4.8	4.9

Source: Malaysia (1986: 184; 1993:43).

Nowhere is this more evident than in housing where the federal government's role in housing in the state of Sarawak is practically negligible other than providing quarters for the essential services and handing out allocation as specified in the national development budget. While efforts at providing public housing in the states in the Peninsula is borne by the Ministry of Housing and Local Government, in Sarawak this is taken up by state agencies. The reason can be traced to the land system in the state which differs greatly from those in the Peninsula (Section 3.5.4). While the system in the other states enables the involvement of federal agencies in land and housing development, and thus allows these states to not only to enjoy the benefit of direct federal assistance but also involvement, the system in Sarawak actually hinders such possibilities.

As far as the State Government itself is concerned, the Land Code (Part 4) provides for acquisition of alienated land for its own use. The Federal Government, on the other hand, has to rely on the Federal Constitution whereby Article 83 provides for this acquisition of land for federal use, and this applies to both alienated and unalienated lands. In Sarawak, however, consultation is required with the State Government regarding alienated land. Various types of

land acquisition are provided for by the Land Code with rules pertaining to each class of land. This will be elaborated further in Section 3.5.4.

3.2 THE ECONOMIC CONTEXT

Ghani (1991) has identified three types of economic disparities in Malaysia. These are regional disparities between geographical locations[6], urban-rural disparities, and ethnic disparities among the three major groups, i.e., Malays, Chinese and Indians. All large cities and towns are found on the west coast of the Peninsula where Chinese and Indians form a large proportion of their population, whereas the east coast is largely rural with a majority of Malay population. Sabah and Sarawak, on the other hand, are both economically backward, rural in character and have neither a large population of Malays nor a high proportion of Chinese. Thus, although the situation in the state is totally different from that in the Peninsula national policies and federal activities are still applied equally, with little allowance given to such dissimilarities.

If the 'economic imbalances' as identified in the Second Malaysia Plan (Malaysia, 1971: 43-44) are used as a measure, Sarawak would score badly in all the three which are,

a) Income imbalances between economic sectors, location and races;
b) Imbalances in employment between location and races; and
c) Imbalances in the ownership and control of wealth.

The following table shows the poverty incidence in 1990. Later figures show that the levels have improved both for urban and rural areas, with rural poverty declining faster than urban poverty. This is true for Malaysia as a whole and the Peninsula. In Sarawak, however, although overall and rural incidence of poverty declined, that of urban poverty has actually increased. This counter trend is due, it is believed, to the migration of the rural poor to urban areas in search of job opportunities. This is one of the results of the absence of federal land development projects in the state, the so called rural development programmes, which has succeeded in ameliorating this effect in the Peninsula. It must also be pointed out that the measures used to classify poor

6 Regional disparities can be viewed from two aspects. The first is the disparity between the Peninsula and the two Bornean States of Sabah and Sarawak. The second is specific to the Peninsula and refers to the disparity between the western and its eastern part. Sadly, in most discussion by the Federal Government on this issue, it is the second view which takes precedence reflecting the strength of the political support they get from the states in the Peninsula.

households differ between the Peninsula and Sarawak[7]. The higher measure used for Sarawak reflects the higher costs of living in the State as well as the larger household size.

Table 3.2 - Incidence of Poverty and Number of Households, 1990

		Sarawak	Peninsula	Malaysia
Poverty (%)	Total	21.0	15.0	17.1
	Urban	4.9	7.3	7.5
	Rural	24.7	19.3	21.8
Hardcore Poverty (%)	Total	3.3	3.6	4.0
	Urban	0.6	1.4	1.4
	Rural	3.9	4.8	5.2
Number of H/H (000)	Total	337.4	2986.4	3614.6
	Urban	62.8	1062.2	1182.7
	Rural	274.6	1924.2	2431.9

Source: Malaysia, 1993:58.

In terms of income distribution, the gap between the rich and the poor is widening albeit slowly. The mid-term review of the Sixth Malaysia Plan reports that for the period under review income of the top 20 percent of households increase at a rate of 10.9 per cent annually, while the middle 40 per cent and the bottom 40 percent increased by 9.9 per cent and 8.4 per cent respectively. In the Peninsula, income changes was greater among the Chinese (10.4 percent) followed by the Malays (10.1 percent) and then the Indians (9.5 percent). In Sarawak, it was reported that the non-Chinese performed better than their Chinese counterparts. In so far as rural and urban changes are concerned, rural household income increased slower than urban household income in the Peninsula (8.4 percent and 9.4 percent respectively) and the country as a whole. In Sarawak, there was again a reverse trend, with income growth in the rural areas exceeding that in the urban (Malaysia, 1993:60-61).

Table 3.3 - GDP per Capita, 1990 (1978 prices)

	GDP	Percentage	GDP/Cap
Malaysia	MR79,455	100 .0	MR4,392
Sarawak	MR 6,669	8.9	MR3,883

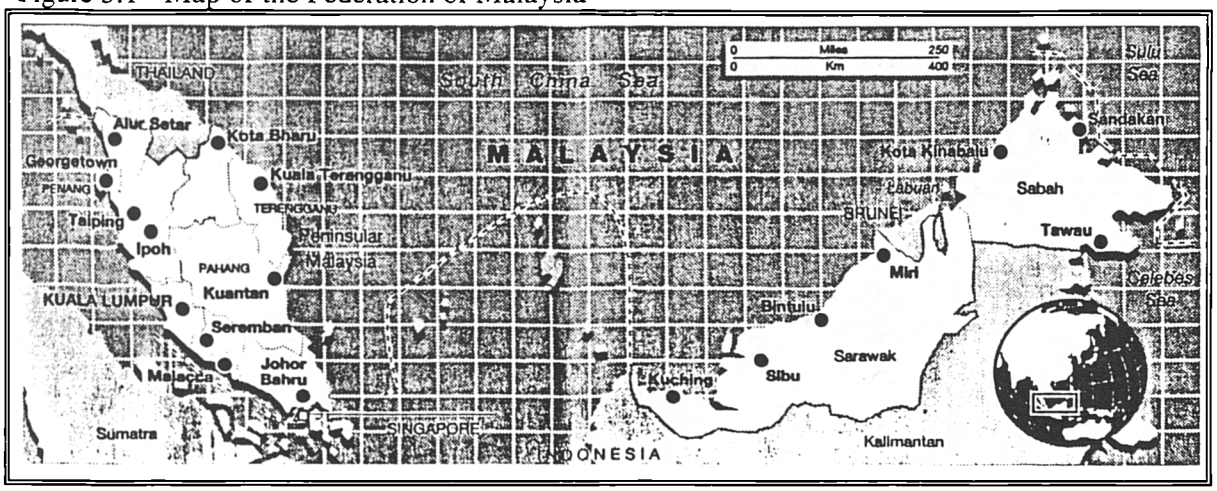
Source: Malaysia (1993: 41)

7 This is based on the so-called PLI or poverty line income which takes into account the minimum requirements for food, clothing and shelter, and other regular expenditures that are necessary to maintain a household in decent standards of living. For the year 1993, for instance, the PLI for the Peninsula was MR405 per month for a household size of 4.8, while in Sarawak it was MR582 for a household size of 5.1.

3.3 THE POLITICAL CONTEXT

At government level, the relationship between the Federal Government and state governments, particularly the two eastern states of Sabah and Sarawak as well as Kelantan and Terengganu on the east coasts of the Peninsula, has not always been rosy although on the surface political leaders go out of their way to claim otherwise. In Kelantan and Terengganu, the situation was brought about by the strength of the opposition Islamic Party in the two state. Kelantan, for instance, has reasserted its independence of UMNO and is now governed by the Islamic Party. This was made possible by the formation of another political party - Semangat 46 - established by a group of disaffected UMNO members before the last general election. While Semangat 46 has failed miserably in other states in the Peninsula, strong regional feelings ensured a more respectable performance in the two east coast states of Kelantan and Terengganu. Sarawak and Sabah, on the other hand, have always been restive over what they perceive to be the insensitivity and heavy handedness of the federal government. This is despite the fact that the regional parties that formed the state governments in the two states have been, most of the time, members of the ruling coalition at federal level.

Figure 3.1 - Map of the Federation of Malaysia



Ordinary Sarawakians, as well as Sabahans, always perceived Malaysia as made up of three entities - the Peninsula, Sarawak and Sabah - as was the case during negotiations for the formation of Malaysia and that each will be an equal partner. They soon found out after independence that this was not to be as the national economic cake has to be shared not among three equal partners, but thirteen, as Malaya is made up of 11 states. The situation is made worse as Sarawak and Sabah make up more than half the total size of Malaysia, have less than 15

percent of the total population, are very rural and backward in relations to Malaya, and have no substantial Malay population.

On the surface however, budget allocation to all states seems to be fair. The Sixth Malaysia Plan, for example, allocated 5.8 percent (later revised to 5.5 percent) of the total to the Sarawak. However, over a third of the total development budget (36.5 percent and later revised to 36.8 percent) is allocated not by the state but under the heading 'Multistate', i.e., for projects whose beneficiaries are nation-wide and whose location cannot be determined (Malaysia, 1993: 50). In cases such as these, priorities would naturally go to the Peninsula where the majority of the population live and where is most pressure on the government. The state has, to its credit, scoured its own treasury to develop the state, and federal leaders were not slow to notice. Instead of interpreting this as the frustration of the state of not getting enough for its development from the federal state, it interpreted it as a gesture that shows its maturity in not depending too much on federal assistance.

It is within this context that housing in Sarawak has to be understood.

3.3.1 Federal and State Responsibilities

Constitutionally, land is a responsibility of the states. It is probably due to this that housing is also a state matter. At the state level, this would seem to be the best arrangement since it is the local authorities which have jurisdiction over the physical and service requirements. Moreso in Sarawak's case since, besides its different land code, it also operates under a different set of planning laws and building regulations. However, due to the lack of tax raising power, finance must come from the federal government. This means that it must compete for an allocation which is severely constrained by national goals, and in a political system that is heavily stacked against it and backed by a national policy that effectively rules out its eligibility.

Although the division of power seems to be clearly defined between the federal and state governments, in practice this is not so. And this complexity is made worse in situations where the states substantially rely on federal resources or where the rapport between the federal and state governments is lacking.

3.3.2 National and State Policy Making Mechanism

The Policy Making Mechanism is split into two, political and administrative. The first can be again divided into two, namely, the party process and the government process. As expected, the policy formulation within the party process is dominated by the National Front, the coalition of parties that form the federal government at national level. This is again dominated by the alliance parties, namely, the United Malay National Organisation (UMNO), the Malayan Chinese Association (MCA) and the Malayan Indian Congress (MIC), which are co-founders of the Alliance and are all peninsula-based parties. Within these three parties, UMNO holds sway by virtue of numbers and influence. For instance, in the 1986 election, the National Front won 148 seats[8], of which 106 belonged to the Alliance. Of these 106 seats, 83 were UMNO's. A similar situation was produced in the last election of 1990, although with a reduced majority due to defections by member parties, where the seats won are 127, 95 and 71 respectively.

Theoretically, all member parties have the forum to put forward their aspirations, which would flow vertically upward through local, state and national level politics, but in practice it is always UMNO's concerns that get translated into political resolutions which are then formulated into national policies. Besides this vertical flow, a horizontal flow is also assumed to take place between the various parties and District and State Action Committees (at local and State level) and between the National Front and the Cabinet (at National level). The latter is eased by the fact that the Cabinet Ministers are also principal figures in the party coalition.

The government process is dominated by the Cabinet under which is the National Action Council and is served by three bodies, namely, the National Security Council, the National Economic Council and the Ministerial Working Group. This arrangement is duplicated at the state and district levels to serve the various state executive committees and district committees as well as to co-ordinate planning from the lowest level to the highest. This allows for a two-way interaction, normally termed as the top-down and bottom-up processes.

The top-down process usually involves huge macro level projects which are generated at the national level. Funding and development targets are 'usually agreed to by mutual consultations' (Endan, 1984) The bottom-up process normally begins with the development needs at the local levels and generated in the form of programmes by the Development Committees. These are

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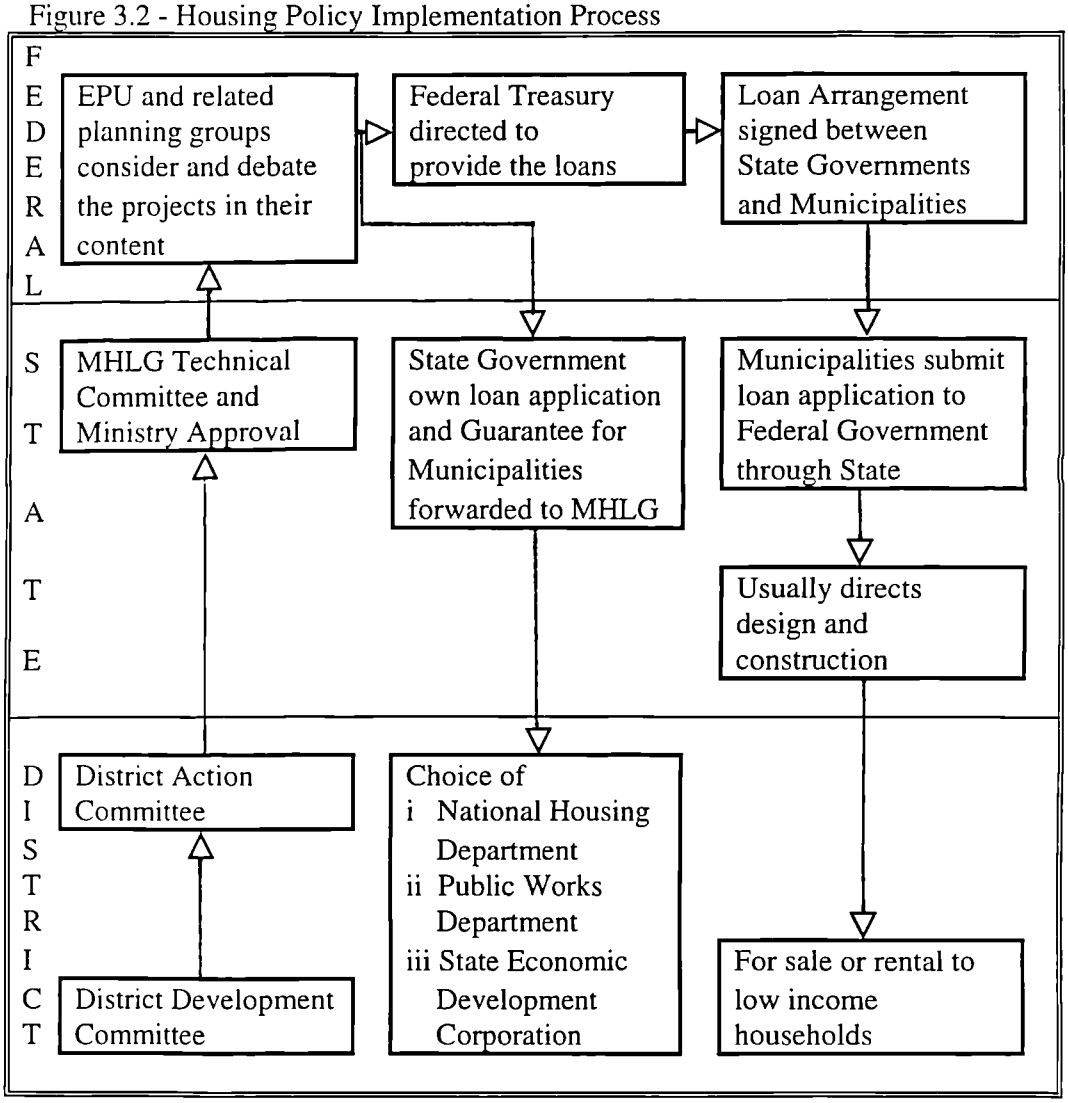
8 In the recently concluded election (April 1995), the National Front took 161 out of the total 192 seats.

then scrutinised by the political leaderships at the various levels before reaching the National Action Council where such programmes are reviewed by federal leaders.

Figure 3.2 - Housing Policy Implementation Process



Source: Endan (1984)

The administrative mechanism is made up of four different parts each headed by a Unit. The first is the Economic Planning Unit which functions as the Secretariat for the National Economic Council. Its role is to design and prepare all economic and social plans for national development. Next to it is the General Planning Unit whose function is to carry out research activities geared at solving national problems. The third is the ICU or the Implementation and Co-ordinating Unit whose responsibility is self-explanatory. Fourth is the Malaysian Administrative Modernisation and Manpower Planning Unit (MAMPU) whose role again is self-explanatory. Another body whose input is essential for all the above bodies is the Department of Statistics. It collects and

compiles all data and makes available to all agencies and the public the required social and economic information necessary for designing government policies.

At the state level, both state and federal departments are represented in the administrative machinery. While the state departments implement state policies and programmes, the federal departments implement policies and programmes of their respective Federal Ministries. Both departments co-ordinate their activities with the State Executive Councils. Equivalent to the Economic Planning Unit at the national level is the State Economic Planning Unit which reports to the State Action Committee. Besides these bodies which provide mirror functions at the state and district levels, two other agencies also contribute to the policy making and implementation roles. These are the State Economic Development Corporations (SEDCs) and the Regional Development Authorities (RDAs). Besides these, the two states of Sabah and Sarawak each have their own housing commission to partake in the construction of housing. Based on these arrangements, a housing programme formulation process can be diagrammatically represented as shown in Figure 3.2.

3.4 EVOLUTION OF PUBLIC HOUSING IN MALAYSIA AND SARAWAK

Public housing as a policy started during the Colonial period when the government provided institutional quarters for its public servants at very nominal maintenance costs. This practice was stopped in 1951 when the Housing Trust[9] was established with an initial capital of MR10m. with the aim of providing public housing to the general public, part middle cost and lower middle cost houses and shophouses. This policy was continued after independence in 1957[10] to provide cheap housing to the poor and to meet a basic social need based on the concept of a home owning democracy (Malaysia, 1964). The Ministry of Housing and Local Government was even created in 1964 to oversee this policy. However, in the words of the government itself, housing is a basic consumer good which 'necessarily has to be subordinated to the economic objectives' (Malaysia 1966: 68) and thus remained low in terms of government priorities.

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9 It was formed upon recommendations made by the Select Committee appointed by the then Malayan Union Government in 1946 to study the nature and extent of housing problems and to propose measures and the financial requirements for its solutions.

10 By the government of the Federation of Malaya. The Federation. together with Sabah and Sarawak, formed the Federation of Malaysia in 1963.

3.4.1 Low Income Housing Policy Before Independence

All the Housing Trust's schemes were undertaken in collaboration with the various State Governments which were responsible for the provision of State land or land acquired for the purpose. This arrangement was necessary as land is a state matter over which the Federal Government has no authority, although it can act in an advisory capacity. In addition, the Trust also undertook schemes for the State Governments whereby the State Government entered into a loan agreement with the Trust, the latter providing the initial capital or loan and the former repaying the loan (collected from monthly repayments from house purchases) over a period of years. This understanding continued until the country attained independence in 1957 and by then 1,496 houses were built.

3.4.2 Low Income Housing Policy After Independence

Housing for the low income started to become a specific policy in the Second Malaya Plan *(1961-65). From then on, housing needs of the low income* has become a permanent part of the national five year plans although the area of emphasis and amount of financial allocation tend to change according to the priorities of the day. In so far as housing budget is concerned, the amount never exceeded 10 per cent of the total national development budget. These are summarised in the following table.

Table 3.4 - Area of Emphasis and Allocation for Public Housing

Plan Period	All (% of Total Exp.)	Low Cost (% of Housing)	Area of Emphasis
2nd (71-75)	7.5	42.5	National Unity
3rd (76-80)	6.1	32.2	Poverty
4th (81-85)	8.3	41.8	Housing for low income
5th (86-90)	9.0	50.0	Housing as basic need
6th (91-95)	3.2	21.0	Housing as basic need

Note: All Figures are revised Allocations
Source: Malaysia (1971, 1976, 1981, 1986, 1991a)

The table above illustrates the low priority given to housing in the overall development of the nation although its effect on the health of the nation - on its people and economy - is profound. What is also significant is that prior to the 5th Plan, housing was a tool to achieve other strategies, and not as an end in itself. A second feature of the national plans is that, from 1986 onwards, there is a substantial fall in the size of allocation for this sector but with a corresponding increase in the number of targeted units. There is a case of asking for too much for too little. Even with a conservative unit price, the 6th Plan has a shortfall of MR2,433m and

small wonder that the targets set in the national plans have never been achieved. Thus, although on paper it has been given the highest priority, in reality it has actually been treated as a residual policy in the country's development planning, more as a tool for other ends than to provide shelter. It is low in priority, and as shown above allocation in the development plans for it in all the National Development Plans to date was not more than 10 percent of total development expenditure.

Housing has been, for a long time, considered a private matter, and the provision of adequate housing is seen as a function of the market process. Marginal government intervention, as seen above, is largely aimed at filling the gap between the low income housing needs and private housing supply and will, in the long run, prove ineffective. The performance of the public sector in low income housing in particular, and in filling this gap in general, is rather insubstantial in comparison to the magnitude of the task at hand.

The task is worsened by poor performances, especially in the completion rate of low cost houses. Completion rate of all public housing can be as high as 86 per cent (2nd Plan) but never below the half way point, whereas the highest completion rate for low cost housing is 61 percent (4th Plan). The high point achieved by low cost performance in this period may be attributed to the few medium and high cost houses planned by the public sector. For this period, only 8 percent of public housing are of medium and high cost, whereas in the previous three they were 56, 33 and 44 percent respectively; and for these periods the corresponding completion rates for low cost housing were only 30, 36 and 40 percent respectively. Glancing through these figures, it seems that more effort is put into completing medium and high cost houses than low cost.

Table 3.5 - Public Housing Performance (1971-1995)*

Period		71-75	76-80	81-85	86-90	91-95
All Public	Target	100,000	220,000	398,570	149,000	174,000
	Completed	86,076	121,500	201,900	91,726	46,670
	% completed	86	55	51	65	27
Low Cost	Target	44,000	73,500	176,500	120,900	126,800
	Completed	13,244	26,250	71,300	74,332	26,370
	% completed	30	36	40	61	21
SLCHP**	Target				240,000	171,620
	Completed				83,940	91,210
	% completed				35	53

Note: * Completed as at end of 1993
** See following text
Source: Agus (1989); Malaysia, (1991a:365); (1993:237)

The situation described above could be attributed to the country's overall development philosophy exemplified by the modernisation approach of pre-1970 and the redistribution with growth strategy of post-1970. The former led to rural based priorities demanding a large proportion of national resources at the expense of urban areas in general and housing in particular. However, all this changed after the New Economic Policy of 1970 was implemented to help the Malays, who by now not only make up most of the poor and economically deprived section of the rural population, but also the majority in the urban areas. National plans now explicitly emphasised the provision of housing as an important component programme designed to eradicate poverty and restructure society, in line with the New Economic Policy, and partly to increase Malay participation in urban economic activity and partly because they make up the majority of the squatter populations in the major towns. In practice, however, finance needed to achieve these goals was not allocated in sufficient quantities but in fact fell by 0.01 percent to 1.6 percent from the previous national plan in terms of total development expenditure.

In the last decade, however, the government has embarked on two major housing programmes. One is the Public Low Cost Housing Programme or PLCHP which was implemented between 1981 and 1985 and formed the backbone of the 4th Malaysia Plan. The second is the Special Low Cost Housing Programme or SLCHP which was launched in 1986 during the period of, but separate from, the 5th Malaysia Plan. The latter is of much interest as it was a response to the economic downturn and one of the few instances where the government has explicitly accepted housing as an investment commodity as a means to stimulate the general economy (Borneo Post, 22nd January and 10 March, 1986). Another feature of the SLCHP is that it still relies on the private sector to produce most of the units but with supporting incentives which include a reduction in infrastructure standards, speedier approval for land conversion and other regulatory matters.

This is quite a move as the changes and incentives proposed were significant in the context of the Malaysian housing industry. Standards, for instance, can be very confusing to a developer; building bye-laws that regulate the physical standards for housing differ from state to state. On top of this, a large part of these standards are applicable to high and medium cost housing only and thus are inadequate for the needs of low cost housing. Although the Federal Authorities have laid down various guide-lines for low cost housing developments, state authorities are not obliged to comply as housing is constitutionally a state matter. Malpezzi (1988) clearly concluded that one of the reasons for the pathetic performance of the SLCHP is the reluctance of the local authorities to process and approve applications *'based on the new standards'*.

3.4.2.a First & Second Malaya Plans (1956-60 & 1961-65)

The emergency regulations after independence in 1957 were only abolished by Parliament in 1960 (Rao, 1980) and took a large portion of the country's development expenditure. They were used to develop rubber plantations, tin mines and Port Klang (formerly Port Swettenham) (Means, 1970). Partly due to this the amount of money allocated to the Housing Trust for housing was insignificant during this period. The First Malaya Plan was allocated MR10m or 5.8 percent of the total budget. This increased substantially to MR45m, but only 6.7 percent of the total budget, in the next Five Year Plan (Malaya, 1960: 48-49). The important event in the life of these two plans, specifically after the 1964 election, was the decision to plan and construct 22,552 units of rural housing in the next Five Year Plan, for which the Federal Government established the Ministry of Housing and Local Government in 1964 to undertake this responsibility.

3.4.2.b First Malaysia Plan (1966-70)

Performance in this period was no better than in the first two. Again, other matters took precedence over housing, in this case the confrontation with Indonesia and financial stringency (Malaysia, 1966). Although the government itself estimated that a sum of over MR1250m would be required to meet new demands as well as to clear the backlog accumulated over the years, only MR150m was put aside for housing. This amount was again reduced to MR120m resulting in the cancellation of a number of earlier approved schemes (Malaysia, 1969), out of which only MR99.79m was spent on 22,522 units of low cost houses, far short of its 35,000 units target. Moreover, out of these 22,522 units completed, 6,838 units were constructed under a separate government 'crash programme' of 1968 which was initiated

a) to build low cost houses where 'the need is greatest, i.e., in the big towns to clear squatters and slum areas', and

b) to spread the limited financial resources in a manner to permit the establishment of small schemes of 30-50 low cost units in each of the suburban towns.

Whatever reasons were quoted behind this programme it was nothing more than a sweetener for the coming 1969 general election.

3.4.2.c Second Malaysia Plan (1971-1975)

Like its predecessors this plan suffered from inadequate funding. Even then, much of the allocation was channelled towards the Federal Capital which was allocated MR62.51m out of the MR89.69m allocated for the Peninsula (Malaysia, 1971: 257). This was done to fulfil the second objectives of the New Economic Policy, i.e., to restructure society, and in this particular incident the need to house the poor rural Malays who have migrated to the capital city.

Nevertheless, only 16.4 percent (MR89.6m out of MR545m) was allocated for low income housing. On the other hand, government housing received MR30m (5.5 percent), while the police and the military were allocated MR30m (5.5 percent) and MR43m (7.8 percent) respectively for housing. Thus, not only that the MR545m allocated for housing make up only 7.5 percent of the total development expenditure but also little of it went to housing for the low income groups.

3.4.2.d Third Malaysia Plan (1976-1980)

On the whole public low cost housing received a better deal in this Plan than the previous ones, where 73,000 public low-cost units were proposed to be built. Again, like its predecessors, poor implementation saw that only 26,250 or 36 percent of these were completed. Surprisingly, the public sector managed to build 37,930 units of medium and high-priced housing, or 44 percent *more* than its low-cost units in the same period.

3.4.2.e Fourth Malaysia Plan (1981-1985)

The Fourth Malaysia Plan saw a replay of the Third Plan, where the public sector delivered only 40 percent of the targeted 176,000 units. Again, high and medium cost housing construction by the public sector performed better in this period.

3.4.2.f Fifth Malaysia Plan (1986-1990)

This Plan saw an ambitious shift in the approach taken by the government, especially in the light of past failures and inadequacies. In the so-called human settlements approach adopted by this Plan, houses are to be provided as part of a total provision of social facilities, on top of the provision of basic infrastructure, and thus not limited to housing provision only as in the past. 120,900 units of low cost housing were expected to be constructed, out of which, 35,800 units

were to be undertaken by the various state governments, while another 37,200 were to be a joint venture between the government and the private sector. The public sector managed to deliver 61 percent or 74,330 units of its target, while the private sector completed 4,940 units, or a measly 4 percent of its target. This poor performance was blamed on the shift of emphasis to the SLCHP programme which managed to complete 35 percent of its target.

3.4.2.g Sixth Malaysia Plan (1991-1995)

Of the total budgetary allocation for this Plan period, only 1.5 percent was put aside for housing. This was later doubled after revision to 3.2 percent. The public sector was expected to construct 126,800 units of low cost housing but half way through the Plan period, only 26,370 units or 21 percent were completed. Again its performance in medium cost and high cost housing construction was much better; half way through the Plan period it completed 41 percent of the targeted medium cost houses and 84 percent of the targeted high cost houses (Malaysia, 1993: 237). The private sectors performance was highly commendable - for the same period it delivered 62 percent of its targeted ordinary low cost housing, and 53 percent of its targeted SLCHP programme.

3.4.3 Low Income Housing Policy in Sarawak

Prior to independence, public housing was provided by the Colonial Administration with funds from the Colonial Development Fund. Houses were mainly built in Kuching, Miri and Sibu due to the population pressures in these three largest settlements in the State, and all were rental housing. Post-war planning in the state started in 1947 and the first post war plan produced was the 1947/8 Development and Welfare Plan. This was later succeeded by another plan for the year 1955/6. In between a Development Plan covering the period 1951 to 1957 was approved in 1952. It is in this plan that, although the focus was on trade and food production, provision was made for housing in the larger centres of population (Sarawak, 1952). Kuching was allocated MR3m while Miri received MR0.5m, both of which was provided by the Colonial Development Fund. Two other major plans were produced before independence, the Supplement to the Development Plan, 1959-63 and the Development Plan of Sarawak, 1955-60. In both, allocations were provided in the form of loans to either finance expanded schemes in the first Development Plan or for rebuilding shophouses as well as to provide housing loans for civil servants (Sarawak, 1954; 1960). The revised plan of the 1955-60 period also suggested loans for schemes to alleviate overcrowding due to housing shortages especially in the towns of Kuching, Sibu and Miri.

The Report on Development for the year 1956 said that 156 units were completed in Miri (40 terrace houses and the rest in 11 blocks of 3-storey flats), 336 in Kuching (all in 6 blocks of 7 storey flats) while 240 were approved to be constructed in Sibu and work started only in 1958. The Report for the following year highlighted the increased costs of construction for the houses in Kuching and thus suggested that home ownership should be looked into, while the houses in Miri were going to be sold since the Council declined to administer them.

Post-independence housing performance of the overall housing industry in the state is more difficult to assess. This difficulty is owing to poor record keeping which makes it very difficult indeed to actually find out, not just the number of low cost houses that have been built in the state since independence, but also the amount of money spent and the number of people affected. A number of factors contribute to this; the absence of a central body in the state to collate this information, its sheer physical size, the absence of a clear housing policy and target, ad-hoc development (housing *et al*) due to the absence of master or structure/local plans plus a myriad of players in the housing market without central control or co-ordination. While standard rules are applied to all other states in the Peninsula, assisted by properly prepared structure/local plans thus ensuring accurate and up to date information on housing supply, the same therefore cannot be said of Sarawak. What we can be pretty sure of though is that after achieving independence for more than 30 years, it is still far behind its sister states.

Table 3.6 - Units Completed in Sarawak (81-91)

SHDC low-cost	3702
LHAs	867
SEDC	2176
Government Quarters	581
Cooperative Housing	337
Private Housing	15703
TOTAL	31029
1980 CENSUS	231537
1991 CENSUS	365359
DIFFERENCE	133822

Source: Nong and Ramachandran (1993)

To illustrate the point on data difficulty, when the field work was carried out, a group of officers from the Federal Ministry of Housing and Local Government (MHLG) was in the state to verify from the various housing bodies the number of units submitted to the Ministry as completed. The visit was instigated because of the discrepancy in the figures given by the 1980 and 1991 Census Reports. The 1980 Census reports that there were a total of 231,000 units of dwellings in

the state, and this increased by 134,000 units ten years later as shown by the 1991 Census of 365,000 units. However, the visiting group said that only 31,000 units were registered with the MHLG as completed by the authorities within the same period, which is only 25 per cent that reported between the two Census Reports (see Table 3.6). While other authorities inflated their figures, the Sarawak Housing and Development Commission under reported theirs. Figures submitted to the MHLG by the Commission for the period was only 3,702 units when almost twice that number have actually been completed. Such anomalies, therefore, question the validity of housing performances as well as the housing situation as portrayed by the authorities, or even by interested and critical observers.

Table 3.7 - Housing Units Completed by SHDC, 1981-91.

Low Cost		Medium and High		Shophouses	
S/S Terrace	2455	D/S Terrace	1401	Shophouses	57
Longhouse	493	Quadrants	436		
Site Services	526	Semis	568		
Total	3474	Total	405	Total	57

Source: SHDC, 1992

This dismal performance can also be explained by the lackadaisical attitude taken by the state where the provision of low cost housing is solely the responsibility of the Commission which, like its counterparts in the Peninsula, seems to attach equal if not more importance to medium and high cost houses. To worsen the problem, private developers in the state are not bound by law to construct low cost houses like their counterparts in the Peninsula who have to put aside at least 40 percent of the proposed units for this category. This was proven by the much heralded Special Low Cost Housing Programmes of 1985 which was doomed from the start although the state, through the MHLG, established a Steering Committee at State level in 1986 and chaired by the Minister himself. Nevertheless, the SHDC was allocated MR20m under the 5th Malaysia Plan, of which MR10.7m and MR9.3m went for the development of low cost houses in Siol Kanan and Batu Kawa 2 respectively. Both these two areas are used as case studies together with Istana Dua, built much earlier.

In order to overcome the inaccuracies of these figures, at least for the City of Kuching, records were collected from the offices of the Kuching North City Hall, Kuching South City Hall and the Kuching Rural District Council. Within the same period as discussed above, less than 20,000 units were completed, giving an average of 1,900 units per annum. This, it must be remembered, is for a City whose population increased by 104,000 within the same period. Of the total units completed, only 35 percent were constructed by the public sector and 20 percent were low cost

houses. Two other significant facts can be gleaned from the table; one is the slow rate of approvals and the other is the slow rate of completion. From the totals for the period, the number of applications approved were actually more than double the number of applications submitted showing that more than half the approvals were for applications made before the period in question. On the other hand, the total number of units completed were almost three times the number of applications submitted and a third more than the numbers approved.

Table 3.8 - Number of Housing Applications, Approvals and Completions for Kuching, (1981-92)

	No of Applications.	No of Approvals	No. of Completions
1981	108	111	50
1982	655	463	1049
1983	948	819	934
1984	1093	1087	2969
1985	933	954	1741
1986	360	2400	1450
1987	397	1543	1736
1988	317	1109	1525
1989	415	958	1006
1990	350	1458	1304
1991	358	716	2203
1992	516	2019	1428
Total	6450	13637	17395

Source: Kuching North City Hall, Kuching South City Hall and Kuching Rural District Council, 1992

This in itself explains one reason for the poor housing performance in the state as well as the lukewarm response of developers when housing demand is high. The length of time taken for a plan (from the submission of layout plan to the approval of draft plan) to be approved can vary between 2 and 5 years (see Appendix 3.1 for a flow chart of the process). Clearly such delays can dampen the interests of private developers especially when programmes like the Special Low Cost Housing Programme last only three years.[11]

Thus, the Federal Government's direct involvement in public housing in Sarawak is minimal. This role is undertaken by three semi-governmental agencies namely, the Sarawak Housing and Development Commission, the Borneo Development Corporation and the Sarawak Economic Development Corporation. However, only the Sarawak Housing and Development Commission

[11] In the Peninsula, part of the government move to assist in the implementation of this SLCHP programme was the establishment of the so-called 'one stop agency' where theoretically all decisions related to this programmes are gathered under one roof to hasten and shorten approval times.

construct houses costing less than MR45,000. The Borneo Development Corporation cater for the needs of the higher income while the Sarawak Economic Development Commission cater for the medium income market. Houses sold by the Sarawak Housing Commission are priced between MR4,000 and MR65,000, depending on the locality and type of construction. Housing for the low income, however, are priced below MR32,000, as opposed to MR25,000 in the Peninsular, and sold to those with a monthly income of less than MR700.

3.5 THE STATE OF SARAWAK

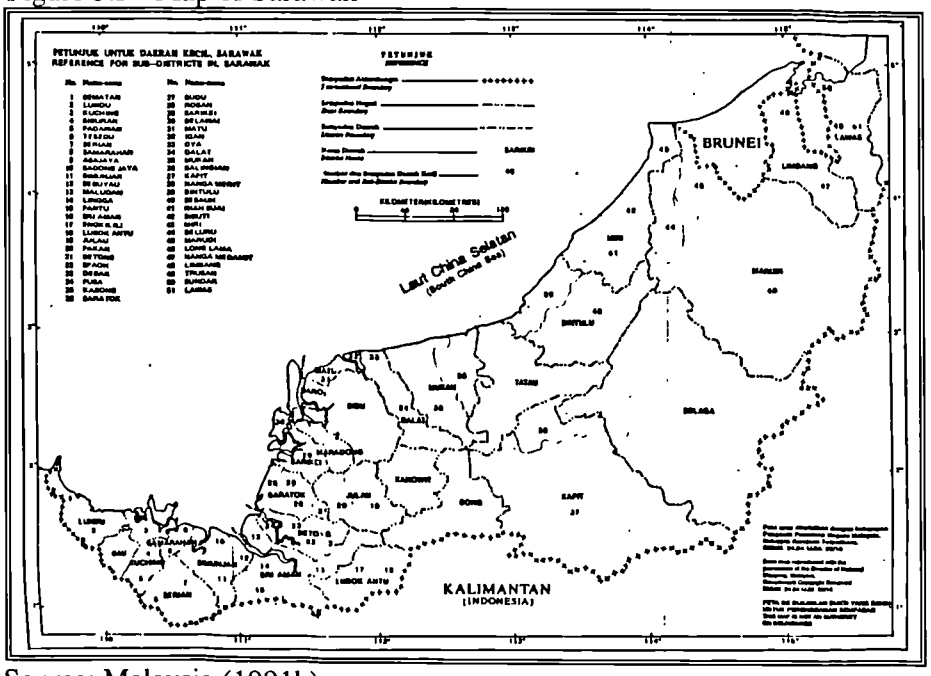
Sarawak was, from the fifteenth to the early part of the nineteenth century, part of the Brunei Sultanate and administered by the Sultan's viceroy. The oppressive rule of the viceroy resulted in the 1839 revolt by the Malays and Land Dayak inhabitants of the territory. James Brooke, an Englishman who happened to sail through the region at the time, was requested by the Sultan to help intervene in the dispute and succeeded. In recognition of this, the Sultan installed him as the Rajah of the territory, known as Sarawak, in 1841. Further lands were acquired from the Sultanate between then and 1905, some by cession, some by annexation and some by purchase from the British North Borneo Company. In 1850, it was recognised by the United States as an independent State while recognition from Britain was given in 1864.

A new constitution was enacted in 1941 by the third Rajah of Sarawak, Sir Charles Brooke, as a centennial mark, but before this could be fully implemented, the Japanese invaded in the following year. He resumed administration in 1946 after the Japanese occupation but because he could not afford the resources needed by the state for war reconstruction, a bill was passed to hand it over to the British Crown. The state remained as a Crown Colony until the year 1963 when it agreed to join the newly formed Federation of Malaysia, encompassing Malaya, Singapore, Sarawak and North Borneo (Sabah).

The idea for the establishment of this Federation was enunciated in 1961. In Sarawak it led to the formation of the Lord Cobbold Commission in 1962 which reported in favour of the proposal and in the same year the Inter-Governmental Committee, with representations from Britain, Malaya, Sarawak and North Borneo, was set up to study the practical problems of establishing the Federation. The findings made by the Committee in 1963 contained safeguards for the special interests of Sarawak and North Borneo. Even so, the two states of Sarawak and Sabah have not been very happy with the way the Inter-Governmental Committee Report, popularly known as the IGC Report, is being implemented, leading to a feeling that, instead of attaining

independence through joining the Federation of Malaysia, they have become colonies of a different power.

Figure 3.3 - Map of Sarawak



Source: Malaysia (1991b)

In the newly formed Federal Malaysian House of Representatives, Sarawak was allocated 24 seats out of the total 180 for the whole country. Today, because of its sheer size, the state is divided into nine administrative divisions, each with its own divisional centre headed by a Resident who is accountable directly to the State Secretary. Kuching, where the three case studies are located, acts as the divisional centre for the First Division while at the same time performs the role of the State's Capital.

3.5.1 Physiography

Sarawak consists of a coastal strip, 724 km. long and varying from 64 to 193 km. wide, on the north-west coast of the island of Borneo, with a physical area of 124,450 sq. km. Physically it can be divided into three parts, a coastal area made up of extensive coastal peat swamps fringed by narrow coastal, deltaic alluvial plains, an area of rolling country intersected by mountain ranges; and a mountainous region in the interior. The mountainous interior remains inaccessible to all except the adventurous and extends right to the Indonesian part of Borneo. The highest peak is Mount Murud, 2,423m high. The natural watershed formed by the mountainous interior forms the international boundary between the state and Kalimantan Indonesia.

It is also from these mountainous interiors that numerous rivers spring to dissect the state while at the same time becoming the main waterways for transport. In the interior they flow through gorges, change to rapids in the hilly region, and finally meander lazily in the coastal part to form huge deltaic systems. While the road systems provide linkages in the coastal and hilly regions, many of the riverine systems are navigable for considerable distances and provide the necessary links for those travelling from the coasts to the interiors.

The great river systems are fed by a tropical monsoonal climate that is warm and wet. There is abundant rain which falls throughout the year with November to March being the wettest due to the North east Monsoon. In 1991 a total of 3814.4 mm. of rain fell in 224 days, with the maximum of 103.2 mm. recorded in a day. Temperature and relative humidity are, like the rainfall, uniformly high. The daily temperature reaches 31.5 degrees Celsius during the day and 23.1 degrees Celsius at night.

3.5.2 Population

The population of the state, as a proportion of the whole country, has remained steady (around 9 per cent) in the last 20 years. This was due to the proportional increase in the last two decades, where both the state's and the nation's population increased at an annual average of 2.3 per cent and 2.6 per cent between 1970-1980 and 1980-1991 respectively. This increase in population has meant that the population density for the state has increased from 8 to 10 to 13 persons per sq. km. in 1970, 1980 and 1991 respectively still making it the most sparsely populated of all the Malaysian states. The nation's density for the same periods were 32, 40 and 53 persons per sq. km. respectively.

Table 3.9 - Population

	1970 (% rise)	1980 (% rise)	1991 (% rise)
Sarawak	976,269 (26)	1,234,553 (21)	1,648,217 (25)
Malaysia	10,439,430 (26)	13,136,109 (21)	17,566,982 (25)

Source: Sarawak (1991b)

In 1991, the total population of the state was 1.6 m. out of which 29.5 per cent were Ibans, 28.9 per cent Chinese and 20.8 per cent Malays. Of these three major ethnic groups, only the Malays have shown a steady increase from only 17.4 per cent of the state population in 1960 to 20.8 per cent in 1990. The Chinese share fell from 30.8 per cent to 28.9 per cent, while the Ibans fell from 31.1 per cent to 29.5 per cent.

Table 3.10 - Population Distribution by Ethnic Group

	('000)				(%)			
	1960	1970	1980	1990	1960	1970	1980	1990
Ibans	238	303	396	493	31.9	31.1	30.3	29.5
Chinese	229	294	385	483	30.8	30.1	29.5	28.9
Malays	129	181	258	348	17.4	18.6	19.7	20.8
Bidayuh	58	84	108	140	7.7	8.5	8.2	8.4
Melanaus	45	53	75	96	6.0	5.5	5.7	5.8
Other indigenous	38	51	69	91	5.1	5.2	5.3	5.5
Others	8	10	17	19	1.1	1.0	1.3	1.1
TOTAL	745	976	1308	1670	100	100	100	100

Source: Sarawak (1991b)

3.5.3 Household and Household Size

Table 3.11 - Average Household Size 1990

Malaysia	4.91
Sarawak	4.97
Kuching	5.36

Source: Sarawak (1991b)

There were 331,874 households in 1991 with 68,714 or 20.7 per cent concentrated in Kuching (Sarawak, 1991b). This works out as an average of 4.97 persons per household for the state as against 5.36 for Kuching. Both are slightly higher than the national average of 4.91. While no figures are available for the average household size by ethnic groups, for 1982 the Malays had the highest (5.56) followed by the Bidayuh (5.42), Melanaus (5.23) and Chinese (5.06). The Ibans who make the largest ethnic grouping in the State had an average household size of 4.29 (Sarawak, 1991b).

3.5.4 Income and Poverty

The mean monthly gross household income for the state is MR1,208 as against MR1,033 in 1984. The mean for the Chinese population was MR1,754 while the Bumiputras[12] were just over half of this (MR932). The incidence of poor households in 1990 was 21.0 per cent or 70,900 of the total households.[13] This was a decrease of 14.0 per cent from 1985 when 90,100 households were considered poor. For hardcore poverty[14] 10.0 percent of the total state's population fell within this category in 1985, and it drastically dropped to 3.3 percent in 1990.

12 A generic term meaning 'Sons of the Soil' used to refer to the Malays and other indigenous peoples.
13 Gross monthly income of MR452 and below.
14 Gross monthly income of MR226 and below.

Table 3.12 - Incidence of Poverty and No of Poor Households

	1985	1990
Incidence of poverty (%)	31.9	21.0
No of poor household	90,100	70,900
Incidence of hardcore poverty (%)	10.0	3.3
No of hardcore poor household	28,200	11,100
Total households	282,400	337,400

Source: Sarawak (1991a)

3.5.5 Land System

In Malaysia, land is a state matter. In the case of Sarawak, this right was stipulated in Para 23(8)(iv) of the Cobbold Commission Report carried out to look into its position before the formation of Malaysia (Zaini, 1984). When the state was still part of the Brunei Sultanate, all land belonged to the Sultan and the natives had to pay tributes for the use of these lands. But during the Brooke period, the natives' customary rights over land was greatly respected and this has developed into the present land system in Sarawak. The land regulations of 1863 and subsequent land orders of 1920 and 1931, made claims to state proprietorship in land and provided for leases to be taken out. The 1933 Land Settlement Order introduced the Torrens System where a gradual survey and registration of land was carried out. A distinction was also made in the same year between Native Areas and Mixed Zones. These regulations were all incorporated in the Land Code of 1957 by the Colonial Government and are still in force to date (Zaini, 1984).

Under this Land Code land is categorised into five classes, namely; Mixed Zone Land, Native Area Land, Native Customary Land (NCR), Reserved Land and Interior Area Land. Mixed Zone Land is land which can be alienated to any race and it can also be occupied by a native under customary tenure. Mixed Zone Land held under customary tenure can only be alienated after the rights have been surrendered. Most of this land is found in the First, Second, Third and Sixth Division of the State where most of the big towns are, and about a third of this land is owned by the Chinese. Native Area Land, as the name implies, can only be alienated and held by natives and makes up just under 10 percent of the total land in the state. Native Customary Land, on the other hand, covers all land held by natives, communally or otherwise, under customary tenure and without title. This land must have been lawfully created (clearance of virgin jungles and occupation and cultivation of crops and still subsisting as such) prior to the 1st day of January, 1958. The land ceases to belong to this category once title is issued and it can either become mixed zone or native area land.

Reserve Land, which makes up about 15 percent of the total land, is land kept for use by the government. It comes mainly in the form of Forest Reserves, Protected Forests, National Parks, Wild Life Sanctuaries and so on including those used by government buildings, roads and agricultural stations, as well as state land. State land here is defined as land in which no document of title has been issued including all forfeited lands. Interior Area Land is land which is free from Native Customary Land. It cannot be held under title but under certain circumstances customary rights can be given. It is mainly deep in the interior made up of primary forest and other unoccupied lands.

The Land Code provides three types of acquisition of land for public use. The first is provided under Section 47 or Section 48 for the purposed enumerated under Section 46 which provides the right to acquire alienated land for the purposes of commercial, industrial, residential, agricultural and for the development of public amenities. If the land is under NCR category, Section 5(5) of the Land Code empowers the Minister to extinguish this classification whenever he thinks necessary to enable the land to be acquired for public purpose and for the purpose of facilitating alienation. Finally, Section 73(3) gives the government power to acquire waste or arable land under temporary occupational licence (TOL), at the expiration of the TOL and if the land is deemed unfit for its original use (Zaini, 1984). While ample opportunities exist for the state to acquire land for its own use, nothing similar can be said of the federal state which partially explains its minimal presence in the state development process.

3.5.6 Land-Use

Table 3.13 - Land Use in Sarawak (1991)

Land Use	Area in sq. km.	% of Land Area
Swamp forest/swamps	14017.2	11.37
Dry Forest	68204.9	55.34
Agriculture	359.6	0.29
Horticulture	468.2	0.38
Commercial crops	2477.6	2.01
Rubber	1449.0	1.18
Shifting cultivation	36533.1	29.64
Secondary growth	633.7	0.52

Source: Sarawak (1991a)

Half of the state's land is licensed for logging, with 16,000 sq. km. already logged equivalent to 13 per cent of the total land area or 17 per cent of the forested land (SPU, Undated). The bulk of

the land is taken up by dry hill forest, followed by cleared land for shifting cultivation. Swamp and hill tropical rain forest covers almost three quarters of the land area.

3.5.7 Urban Growth

In Malaysia, definitions of 'urban' and delineation of urban boundaries for statistical purposes differ between Censuses, making it difficult to compare data (Ko, 1985). In Sarawak, urban refers to any settlement with a population of 10,000 and over. Since the 1947 Census, the urban population of the state has doubled, from 10.8 percent in 1947 to 18.0 percent in 1980. Despite an increase in the proportion of Malays and Ibans in the urban areas, most towns were still predominantly Chinese. Given the relatively low growth rates of the Chinese, this trend seems likely to continue especially in relations to the Malays.

Table 3.14 - Urban Population

Year	Percentage
1947	10.8
1960	12.6
1970	15.5
1980	18.0

Source: Masing (1988)

Like many developing countries, Sarawak's urban spatial pattern is determined by its economic structure. The major towns which initially acted as exit points for its economic products took another role as entry points for its economic needs, and they then gradually developed into centres of administration. The economy is entirely based on the export of raw materials with petroleum, gas, timber and plantation crops as the main export earners. The bulk of the population therefore make their living in the rural hinterlands, mainly involved in shifting agriculture. The role of the urban centres then was to provide the necessary service sector for the sustenance of the rural hinterlands. Kuching, being the capital of the state, provides the more specialised activities such as banking.

The main reason that led to the growth of urban population was not so much the attraction offered by the jobs in the City of Kuching, although the increase was quite remarkable as we have seen earlier. It was the discovery of petroleum and gas off the coast of Bintulu which had given this impetus. The majority of very recent increases in urban population are to be found in Bintulu which has grown from a sleepy town in the early eighties to become the fourth largest in

the State. Even the rural-urban migration to Kuching was indirectly caused by the growth of service industries in support of the petroleum and gas works in Bintulu.

3.5.8 Political Economy of Development in Sarawak

Soon after joining Malaysia, the state was governed by a coalition of parties led by the Sarawak National Party (SNAP) with the Sarawak United Peoples Party (SUPP) in opposition. In 1966 SNAP was ousted from power through dissolution by the Federal Government and the leadership of the coalition was taken over by the Pesaka Party. In 1970 the Pesaka and another coalition partner, the Bumiputra Party, were both dissolved to form a single party, the Pesaka-Bumiputra Bersatu (PBB). The PBB and SUPP formed a coalition with SNAP acting as an opposition. However, in 1978, SNAP opted to join the coalition and for a number of years the state was governed without any opposition benches. The PBB-SNAP-SUPP coalition has, since then, governed the state uninterrupted, although there is now a token opposition offered by the Parti Bansa Dayak Sarawak (PBDS) - an offshoot of SNAP - which, strangely, sits among the coalition partners at Federal level in Kuala Lumpur.

The situation does look strange from outside, but, as Leigh says, politics in Sarawak is all about the control of land, timber and minerals (Leigh, 1979). To this one may add the ethnic nature of Sarawak's politics. To understand this, one simply has to see the reason behind the formation of PBDS which, despite other reasons being put out, was their unhappiness over the fact that SNAP, although Iban based, was led by a Chinese. In other words, it is not enough that an Iban-based party have a say in political decisions, the leaders too must be Iban. To comprehend this, one again has to refer to Leigh (1979) who writes that political officers confer the right to authorise the use of land for commercial development, to approve licences for timber extraction and to allocate revenue flowing from mineral extractions. Some writers believe that the pattern that is evolving in the state has the tacit support of the central government in order to assert the primacy of racial politics over those based upon shared interest, so that Sarawak will accord with the national pattern (Leigh, 1988).

At the Federal level, relations between the State Coalition and the Federal Government is very cool. While the Ibans have been lobbying for more share of the state's economic cake, the State has been making a similar demand of the national economic cake. Compounded with this, there has been the dissatisfaction over the implementation of the IGC Report, where locals are restive over what they perceive to be the heavy hand of the federal government (von der Mehden, 1991). Reece (1969, 1970), for instance, reports that 'while reducing the annual grant that had been

given to the State since 1964 under the terms of the Agreement to enter Malaysia, ...(the Federal Government) annexed that part of the shelf under dispute, invoking the emergency regulations to do so'.[15] Leigh identifies three ways how the centre has impinged on Sarawak's politics,

i the simple transfer of the instruments of control from the British to the Malaysian Government;

ii the development of those instruments in an effort to mobilise the support of the populace behind the central government, but not so as to heighten their participation in unofficial movements of a political character; and

iii the growing limitation of popular participation in politics in the name of security and stability (Leigh, 1988).

3.5.9 Trade and Economy

In 1991, Japan and Peninsular Malaysia were the state's two main trading partners. The state's total export for the year was valued at MR13,026m as against MR11,284m for the previous year, while import was MR8,393m and MR6,532m respectively, leaving a hefty balance of trade at MR4,633m and MR4,752m. Japan took 42.1 per cent of the total export in 1991, followed by the Republic of Korea at 9.8 per cent. Sawn logs and sawn timber (27.1 per cent), liquified natural gas (25.2 per cent) and crude petroleum (22.3 per cent) made up the bulk of the exports. The main imported goods were made up of machinery and transport equipment (52.1 per cent), manufactured goods (29.0 per cent) and food (8.8 per cent), with Peninsular Malaysia (37.9 per cent), Japan (17.1 per cent) and the United States (15.0 per cent) acting as the main suppliers (Sarawak, 1991).

Table 3.15 - Percentage distribution of labour force (major industries)

	1960	1970	1980	1990
Agriculture,forestry,hunting,fishing	81.4	68.0	60.6	47.1
Manufacturing/construction	5.5	6.5	9.5	15.1
Services	5.5	11.0	17.5	19.4
Others	7.6	14.5	12.4	18.4

Source: Sarawak (1991a)

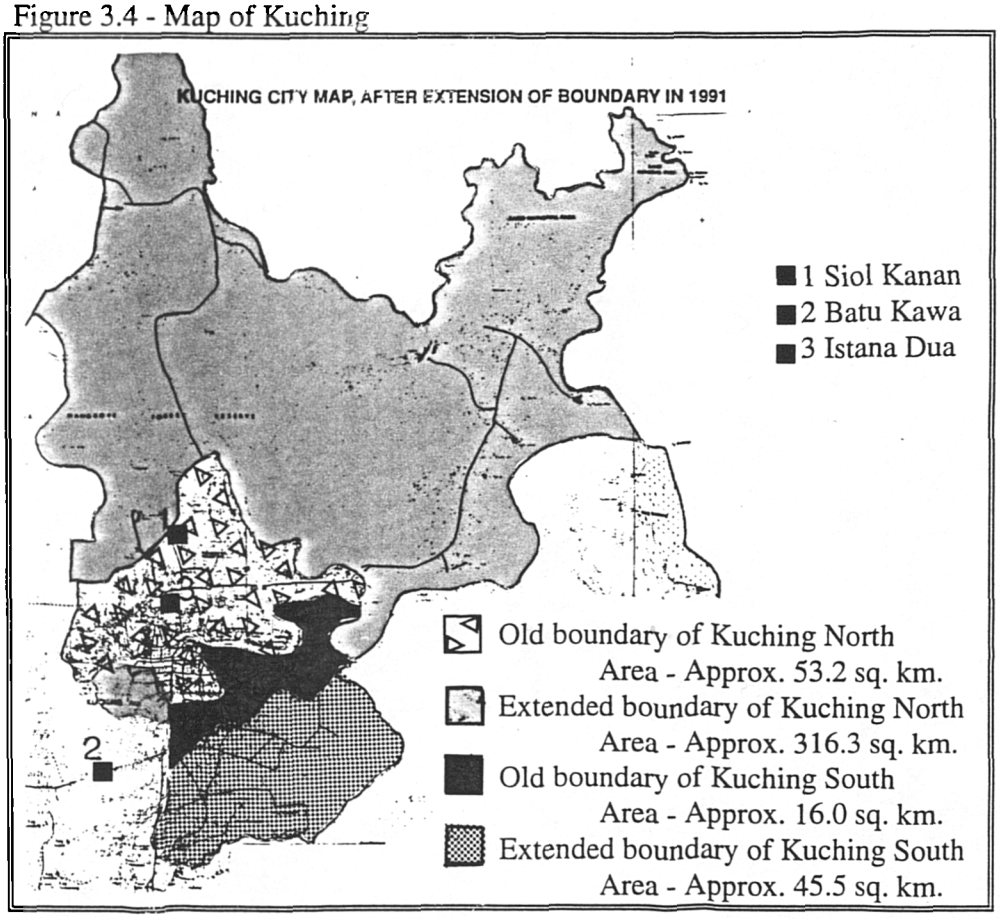
15 The Continental Shelf Act claims areas between 3 to 12 miles out as belonging to the Central Government, while the State disputes it. Most of Sarawak's later discovered oil and gas fields lie within this area.

has decreased from 81.4 per cent in 1960 to only 47.1 per cent in 1990. The other two sectors, however, have seen a steady increase form 5.5 per cent to 15.1 per cent and 5.5 per cent to 19.4 per cent respectively.

3.6 THE CITY OF KUCHING

Sarawak as a state and Kuching as a settlement did not exist until 1872. Prior to this Sarawak referred to a settlement situated on the banks of the Kuching River,[16] and which today has grown into the City of Kuching. Between 1841, when land was first ceded to the Rajah, and 1872, this settlement was known as Sarawak Proper while the whole of the land ceded to the Rajah came to be known as Sarawak.

Figure 3.4 - Map of Kuching



16 There is however evidence to support claims that the settlement was known as Kuching long before the arrival of James Brooke.

When James Brooke became the Rajah of the territory, Kuching, or old Sarawak became his seat of government. It was under his rule that piracy and head-hunting were abated and law and order enforced. However, Kuching itself saw changes only during the reign of the second Rajah, Charles Brooke (1868-1917), all because of the great fire of 1884, when it was rebuilt and transformed into a town with government buildings and communication services. Reece (1988) believes that the first two Rajahs were averse to developing Sarawak and Kuching because they 'saw outside investors as a potential threat to their political dominance.' This, not surprisingly, was in direct conflict with the British Crown who saw the acquisition of the state for their benefit. There was even evidence that the British Crown connived in attempt to dislodged Charles in 1912 and replace him with Vyner who was seen to be more amenable to large-scale British investment (Reece, 1988). Thus, when the Japanese occupied Sarawak in 1941, it was - under the reign of the third Rajah, Charles Vyner Brooke (1917-1947) - 'operating to some extent within an export-oriented cash crop economy.' The Kuching Municipal Council managed the municipal affairs of the town until August 1988, when it was dissolved and replaced by the Kuching North City Council and the Kuching South City Council.

3.6.1 The Administrative Arrangements

The Kuching City of today retains much of the colonial legacy especially in the city centre. Its present physical plan and land use pattern does not betray the usual conflict between the vernacular and foreign character inherent in many big settlements. The architecture of the buildings introduced by the colonial administration was supplanted onto a settlement that had developed organically and had no permanent buildings. Even if there were, these would have been destroyed by the great fire of 1884 thus giving the administrators a clean slate to start with. The resultant buildings were a mixture of both east (the old shophouses) and west (the government offices), often next to each other, each designed and constructed where and when needed, so much so that one does not distinguish between pre-colonial and colonial buildings or areas. There is therefore none of the pre-colonial, colonial and post-colonial character that is evident in most third world cities. In Kuching, there is only the old versus the new, or the traditional (which includes the colonial artefacts) versus the modern.

What is clear though is that the physical form and the layout pattern of the city has been very much influenced by Colonial standards, resulting in the sprawling nature of the City today. The Development Control Standard (Sarawak, 1968) practised by the state can be traced to the Town

and Country Planning Act of 1952.[17] It is this standard that regulates the building lines, lot sizes, density and types of all developments in the state and not, as in Peninsular Malaysia, by a Structure or Local Plan.[18]

In 1988, the Kuching Municipal Council was dissolved and its area split into two. In its place were created the Kuching North City Council headed by a Commissioner, and the Kuching South City Council headed by a Mayor. Kuching North covers a part of the former Kuching Municipal Council area as well as part of the territory formerly administered by the Kuching Rural District Council, an area totalling 53.19 sq. km. The remainder of the Kuching Municipal Council area, about 16 sq. km., came under the jurisdiction of the Kuching South City Council. In 1991, more Kuching Rural District Council lands were added to these two Councils extending their new area to 369.48 sq. km. for City North and 61.54 sq. km. for the other. Kuching Rural District Council has an area of 1,437.6 sq. km. In terms of administrative powers, the Kuching South City Council remains as a local government authority and retains the same functions as its predecessor, the Kuching Municipal Council, with minor alterations. The Kuching North City Council, however, is not a local government authority but a corporate body and is directly responsible to the State's Chief Minister.

3.6.2 Population

Table 3.16 - Population, Distribution and Density, 1980 and 1990

	Number ('000)		Percentage		Density	
	1980	1990	1980	1990	1980	1990
Sarawak	1,236	1,648	100.0	100.0	9.9	13.2
Kuching	264	368	21.4	22.3	141.3	197.1

Source: Sarawak (1991b)

Kuching today has an area of 1,868.8 sq. km. with a population of 368,000, up 39.0 per cent from its 1980 population of 264,000. This represents 22.3 per cent of the total population of the state as against 21.4 per cent in 1980. The density too has increased from 141.3 persons to 197.1 persons per sq. km.

17 This was based on the British Town and Country Planning Act of 1932.

18 The City Councils are responsible over building design and engineering structures, the Fire Department over fire safety, Water and Electricity Board over water and electricity while the Public Works Department and the Drainage and Irrigation Department are in charge of trunk roads and major storm drains respectively.

Table 3.17 - % Distribution of Population by Age Groups, 1980

	Kuching	Sarawak
0-4	13.8	13.7
5-9	13.8	15.0
10-14	12.3	13.0
15-19	11.7	11.2
20-24	9.9	9.0
25-29	8.7	7.8
30-34	6.8	6.1
35-39	5.3	5.1
40-44	3.9	4.1
45-49	3.5	3.6
50-54	2.8	3.1
55-59	2.2	2.6
60-64	1.9	2.2
65+	3.4	3.5

Source: Sarawak (1991b)

In 1980, 8.3 per cent of the population in the state was over the age of 55 while in Kuching this was only 7.5 per cent. Of those under the age of 15, there were 41.7 per cent for the whole state and 39.9 per cent in Kuching. This means that, for that year the percentage of the dependent population for the state and the City was 50.0 percent and 47.4 per cent respectively. Of the economically active group, 34.1 per cent (Sarawak) 37.1 per cent (Kuching) were aged between 15 and 34. The rest were in the 35 and 54 age group. The population of the state is therefore very young with 75.8 per cent under the age of 35, while in Kuching the percentage rose to 77.0 per cent.

3.7 THE SARAWAK HOUSING AND DEVELOPMENT COMMISSION

The Sarawak Housing and Development Commission was established in 1971 after the passing of the Sarawak Housing and Development Ordinance in November that year. Like many public statutory bodies of the 70s whose origins could be traced back to the aftermath of the 1969 racial riots, the birth of the Commission was closely associated with politics. Although Sarawak was not directly affected by these riots which broke out in some of the major towns in the Peninsula, it did jump on the bandwagon and established a number of para-statal agencies to rectify what was perceived all over the nation as the socio-economic imbalance between different communities, through the New Economic Policy (NEP).

One of the moves was to provide scholarships for Bumiputras to further their education, as at that time only the Chinese were wealthy enough to send their children abroad for further studies. An implication of this move was the need to create statutory bodies where returning Bumiputra graduates could be posted. The three state agencies that existed before the 70s in Sarawak, Sarawak Electricity Supply Corporation, Kuching Port Authority and the Kuching Water Board, were dominated by the Chinese and no new vacancies were available. Whether this was true or not, the creation of the new agencies was accepted by both Bumiputras and non-Bumiputras as vehicles for the creation of a Bumiputra elite or Bumiputra intelligentsia.

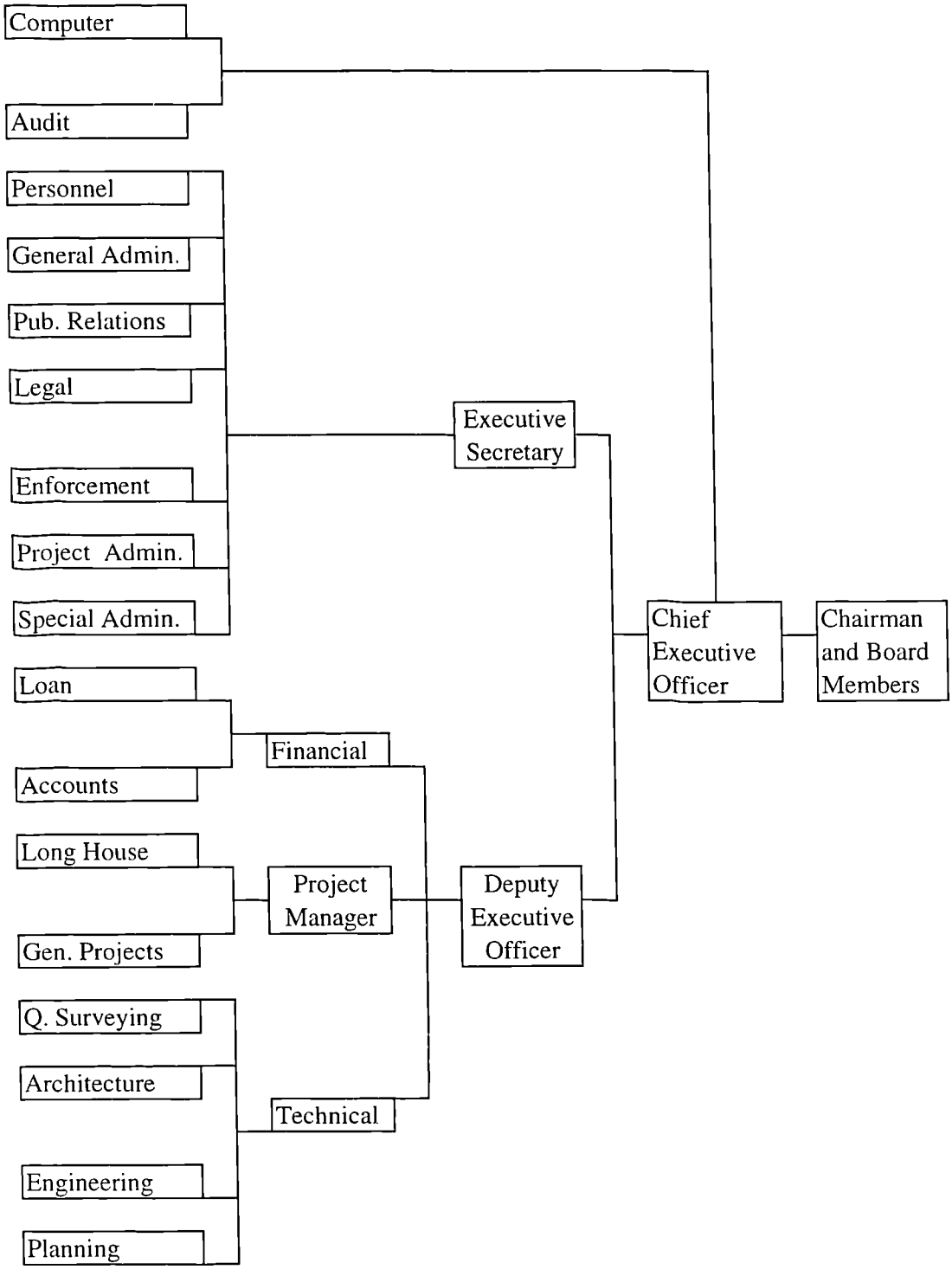
Two new agencies were first created in the state in the wake of the racial riots. One, the Sarawak Development and Financial Corporation (the other being the State Development Unit) was later split into three new agencies in order to streamline its activities, namely, the Sarawak Housing and Development Commission, the Sarawak Economic and Development Corporation and the Sarawak Land Development Board, each responsible for housing, commerce and agriculture respectively.

3.7.1 Operational Structure

The Sarawak Housing and Development Commission started its operation in 1972, a year after its inception. Since then it has completed 6,613 housing units state wide (including the Bintawa Fishermen Resettlement Scheme initiated by its predecessor the Sarawak Development and Finance Corporation) with another 3,088 units in various phases of construction.

It is headed by a Chief Executive Officer who is directly responsible to the Chairman and the Board, made up of six appointed members nominated by the Minister for Housing. The Chief Executive Officer is assisted by a Deputy and a Executive Secretary. Directly under the Deputy are the three operative wings of the Commission - the Technical Section, the Project Management Section and the Financial Section. The administrative wing, under the direct responsibility of the Executive Secretary, oversees among other things the enforcement, legal, public relations and personnel side of the Commission. Two other units, the Audit and the Computer units, are directly under the Chief Executive Officer himself. The Commission now has a total of 294 staff with 27 in the Managerial and Profession Group.

Figure 3.5 - Organisational Structure of the SHDC



Source: Sarawak Housing and Development Commission (1989).

3.7.2 Functions of the Commission

The main functions of the Commission, especially those directly related to housing and building constructions, are outlined in the Ordinance as follows:

a to prepare and execute proposals, plans and projects for:

  i the erection, conservation, improvement and extension of housing and other accommodation;

  ii the clearance and redevelopment of slum areas;

  iii the development or redevelopment of areas designated by the Minister;

  iv the development of rural or agricultural areas for the resettlement of persons displaced by operations of the Commission or other resettlement projects approved by the Minister;

b to manage all lands, houses and buildings or other property vested in or belonging to the Commission;

c with the approval of the Minister, to provide *loans at interest to enable persons* to purchase any development land or part thereof upon a mortgage of such development land or part thereof;

d either on its own or in association with other persons including the Government of the Federation or of Sarawak, any public or local authority, and any body, corporate or incorporate, or as managing agents or otherwise on their behalf to carry on building operations and all other activities which the Commission is empowered to perform by virtue of the Ordinance (Sarawak, 1971, 1982);

Further to these, the following have evolved through practice (Thamby, 1986):

a the provision of decent housing for the low income group;

b the achievement of equity of distribution of resources to provide as many houses as possible to improve the standard of living of as many people as possible;

c the use of the housing programme as a multiplier to stimulate the economy;

d the provision of loans, at reasonable interest rates, to lower income groups, to purchase houses;

e the provision of assistance to land owners to build houses through advice and administrative support.

3.7.3 Sources of Funds

The SHDC has three main sources of funds, namely, the State Government, the Federal Government and the Commercial Banks. Finance from the State and Federal Governments are restricted uses only. The State provides two types of funds in the form of soft loans and grants. The loan, which is charged at 4 percent interest rate, however, can only be used for either housing loans to individuals or for land acquisition. State grant, on the other hand, is only to be used for feasibility studies, boundary survey, site clearance, civil works and water and electricity supplies. The Federal Government do not give any grant at all. Its loan, charged at 5 percent interest rate, can only be used for site formation and building works as well as for administrative purposes. Any other expenses have to be paid from other sources.

The general feeling from the senior staff of the Commission is that it has been fairly treated by both Federal and State Governments when it comes to loan application. Three main factors create problems in this exercise. One, approval of loans and the amount agreed usually depends on past performances and this means less than the total amount last spent. Like most other parastatal agencies, past performance is not very encouraging, part of the reason is related to the two following factors. Two, approval for housing funds also hinge on the availability of land for development. In most cases, land proposed for development is either still being in the process of acquisition or even only in intent for purchase. Three, where land is available and finance has been approved, bureaucratic delays lead to poor project performances.

Such assertions that there is even-handedness are of course difficult to counter since the reasons used to reject or approve allocations are, on the whole, fair. However, whether such criteria are properly exercised when applications from other states in the Peninsula are made has yet to be properly evaluated. Again, it must be stressed that if performance was much more impressive in the Peninsula it is because of greater involvement by the federal agencies especially in regional development schemes and urban renewal projects.

3.7.4 Schemes Implemented

In the pursuance of the above objectives, different types of schemes have been implemented by the Commission. These can be briefly described as follows:

a Public Housing Scheme: This forms the main thrust of the Commission's activities. Under this scheme, the Commission takes responsibility to develop a project from the beginning to its completion. This usually begins with the search for a suitable site and ends not just with handing the keys to the buyers but also giving out loans to selected applicants. The Commission gives a 95 percent loan to successful applicants for a 25 year period irrespective of the applicants' ages.

b Resettlement Scheme: Under this scheme, the Commission's role is to prepare houses in areas allotted by the State Government for the resettlement of dwellers whose land is involved in the state's development programme;

c Site and Services Scheme: This scheme is for households earning less than MR600 per month. As the name suggests the Commission equips the site with the necessary infrastructure and then gives out loans not exceeding MR13,000, charged at an annual interest rate of 5.5 per cent for 25 years, for both the purchase of the site and for building houses. Loan for house construction is given in the form of materials and not cash.

d Loans to Individuals: Under this scheme, the Commission is entrusted by the State Government to provide material loans of up to MR10,000 (5.5 per cent annual interest rate for 25 years) to successful applicants of the Block Alienation Scheme implemented by the Lands and Survey Department.

Table 3.18 - Distribution of projects by type of Scheme (Dwellings)

	Kuching		Other Areas		Total
	Completed	On-going	Completed	On-going	
Public Housing	1529	844	743	256	3372
Low Cost	1553	147	887	172	2759
Resettlement	439	0	538	0	977
Site - Services	0	560	0	576	1136
Loans to Individuals	0	0	34	0	34
Long houses	0	0	890	593	1483
Total	3521	1551	3092	1597	9761

Source: Sarawak Housing and Development Commission (1992)

e Longhouse Loan Scheme: There are two approaches for this scheme. The first is for the Commission to construct a longhouse, through the tender system, sell it and provide loans to the successful applicants. The other is to provide a loan of MR5,000 for applicants to improve and renovate their long houses.

3.7.5 Applicants and their Selection

Anyone who falls within the category stipulated by the Commission can put in an application for its low cost house. Those whose income falls below this level can put in a joint application if his or her spouse is also earning. Records point out, however, that most successful applicants (both single and joint applications) are earning more than the eligibility income level. Application is normally made after a public advertisement is put out by the Commission regarding the project concerned. In most cases, the number of applications far exceeded the number of houses offered. In the case of two of the project areas selected as case studies, the ratio was 19:1 for Batu Kawa and 7:1 for Siol Kanan. The much higher demand for Batu Kawa housing project is due to its mixed zone status which allows non-Bumiputras to apply whereas the other is restricted to Bumiputra applicants only as it is in a Native area.

Selection of the applicants is based on a point system. The factors considered as well as the points allocated for each differ according to each project areas. These are decided by a Committee made up of members from the Special Housing Unit of the SHDC. An example shown by the Commission (but which is not allowed to be mentioned by name) shows that age, income, ownership of land, marital status, residential status, length of stay at address where application was made and number of dependents are factors which are given points. Two others, namely, date of application and type of employment are not given points but are left to the discretion of the Selection Committee. From the points system adopted, the system was clearly biased toward those within the 31-45 age group, those earning between MR601-1,000 (those earning above this - MR1,001-1,300 - get higher points than those earning less), those who are renting followed by those in government quarters (thus favouring government employees), and those with 4-7 dependents. Apart from this, though not mentioned in the points system, priority is given to those born around the town where the project is being constructed.

The system is clearly biased against the group that it is meant to help, i.e., those with less than MR750 per month, and one intriguing query needs to be explained. This is, does the Committee realise the conflicting aims of the policy and the selection process? As it is very difficult not to, it can only be concluded that the system is there by design and thus is aimed at undermining the policy. Furthermore, the higher points allocated for government servants, albeit indirectly, supports the contention that, although the policy is designed to help any low income household, the selection system makes sure that they do not.

3.7.6 Performance to date[19]

Almost ten thousand units have already been or are being constructed by the Commission after operating just over ten years, giving an average of almost a thousand units annually. The bulk of these houses come under the Public Housing Scheme (78 per cent), followed by the Long House Scheme (15 per cent) and the Site and Services (12 per cent) respectively. Out of this total, 69 per cent were targeted for the City of Kuching.

Similarly, the bulk of those which are already completed come under the Public Housing Scheme numbering 4,712 units or 71 per cent of the total. As well as that, 3,082 units or 47 per cent of these have been constructed in and around the City of Kuching. For those units still under construction, a similar picture could be discerned. Out of 3088 units still under construction 1,419 units or 46 per cent are built under the Public Housing Scheme, and again out of this total 991 units or 37 per cent are in the Kuching vicinity.

All the schemes are meant for low income earners except for certain shophouse projects (built as part of the facilities for each project area) and the Public Housing Schemes which are usually of mixed development. If all schemes meant for low income earners are taken together, the total would be 50 per cent of the total units built or being constructed, out of which over half are both in Kuching (55 percent) and in the form of complete low cost houses (56 percent).

3.8 SUMMARY

This chapter has shown that Sarawak, due to its own diverse culture and different socio-economic and political characteristics, is marginalised in all spheres as the national political agenda is organised basically at the behest of UMNO to help solve problems peculiar to Malaya. In cases where it has a valid claim for federal assistance, it still has to contend with the other twelve states, who are mostly represented by the same party that forms the backbone of the federal coalition. If any political bargaining is needed, it is usually carried out within the context of the national political culture, i.e., between the major ethnic races, namely Malays, Chinese and Indians. There is, therefore, this national hegemony which, according to Clapham (1985) 'imposes its role on peripheral areas inhabited by other peoples'.

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19 As of 31 December 1992

While the state gets a raw deal from the federal government, the state itself gives a similar treatment to its own low income households, particularly those outside the state capital. This is shown on the ground by the focus given to the supply of medium to high cost housing by the state agencies and their (including low cost housing) concentration in the state capital, thus further denying the needs of the low income households in the rural areas. On the other hand, among the lower-middle and middle income groups that seem to be favoured by the selection process, those who are self-employed or employed by the private sector are clearly discriminated against.

CHAPTER FOUR

CHAPTER FOUR

METHODOLOGY OF THE RESEARCH

4.0 INTRODUCTION

This chapter describes the methodological approach adopted in this study. It sets out to explain the rationale behind the stages undertaken right from the conceptual framework for the study to the analyses of the survey data. It discusses the assumptions and observations associated with state intervention in the provision of low cost housing and generates hypotheses from these. Using these hypotheses, the research strategy is developed focusing on the methods of data collection and the techniques of data analyses. The general approach is to devise a compromise methodology that seeks what McGrath (1982) describes as the impossible, i.e., to maximise three conflicting criteria: generalizability of findings, precision and control in measurement, and existential realism of what is studied.

4.1 CONCEPTUAL FRAMEWORK

Many reasons have been put forward to justify state involvement in the provision of affordable housing for the poor. Proponents of the pluralist denomination of state theory believe that such an intervention allows the state to redistribute housing to the poor (socially progressive) and to the depressed areas (spatially progressive) (Lim, 1988). This state, also referred to as the liberal state[1], is 'interested in developing a form of welfare society, engaging in rational planning, and spreading the benefits of economic growth to most groups in the society' (Gilbert and Ward, 1985: 3). However, opponents of this view and others have countered that, far from being liberal, the state is actually an instrument of the dominant class (hence the *instrumentalist* state) to subjugate further the working class; or at least works for the benefit of the poor to maintain the dominance of the upper class (the *structuralist* state). Numerous studies have reached conclusions to back these latter assertions. Klak (1990), for instance, has shown the

1 Gilbert and Ward (1985) identify three models of the state; namely the liberal state, the instrumentalist state and the structuralist state.

'regressiveness' of such an intervention, while Gilbert and Ward (1985) have found in their work on three Latin American cities that it is the structuralist state that is at work and not the liberal state. Gilbert and Ward (1985: 242) also found that 'managers' or 'gatekeepers' (Pahl, 1976) determine who and not how many benefits from these housing programmes. This mistargeting of beneficiaries has also been supported by Tipple and Willis (1991:1) who claim that official housing programmes have actually failed to reach the lowest 20 or 40 percentiles of the population.

While a general consensus exists among most housing professionals and academics of all political persuasion regarding state intervention in the provision of low cost housing for the poor, the method adopted has always been disputed. According to Rueschemeyer and Evans (1985), in most cases, public enterprises are used as vehicles for the state to be an active participant in production and market exchange. They say that these vehicles act as fronts for the state to act as an agent of capital accumulation and suggest further that in peripheral states (read developing countries) their actions are more constrained as they are totally dependent on private capital, foreign and domestic, not only to promote accumulation but also to produce a surplus in which the state itself may share. Such interventions generally adopt very high development standards that push up the price of housing and which, consequently, require huge amount of subsidies to sustain them (Hardoy and Satterthwaite, 1989; Malpezzi, 1990). Thus the distributional issues described earlier have much wider economic implications than are generally realised. For instance, despite the amount of subsidy injected in such projects and the higher income brackets of the beneficiaries, the price of these houses remain high due to the very high standards adopted, and are therefore beyond the affordability of these households. It is for this reason that Malpezzi and Bell (1991) consider such an intervention wrong and that the state should instead either loosen up the restrictions that constrict the input side of the housing market rather that actually getting involved in the production process itself, or intervening in the outputs through rent control, subsidies and so on.

4.2 RESEARCH HYPOTHESES

A number of questions arise from the above conceptualisation of state intervention in the provision of low cost housing and which this study will undertake to answer. These questions are: Has the low income group benefited from this housing strategy? If not, who has and why? What implications does this have on the overall low cost housing policy, for instance, will changing affordability levels improve the rate of recovery and replicability of the projects? How well has this group of beneficiaries accepted these houses which were not designed for them,

especially in terms of quality and price? What, in the end, are the final costs and benefits to all concerned? In order to answer these questions, the following hypotheses have been developed.

a) The low cost housing units built by the SHDC in the urban area of Kuching have not benefited the identified target group.

The above hypothesis, which evaluates the *accessibility* of the target group to these houses, will be tested by the following sub-hypotheses :

(i) Some beneficiaries have been allocated houses not based on eligibility criteria but because of political interference;

(ii) The low cost houses have benefited a great proportion of households from outside the target group; and

(iii) The beneficiaries that fall within the target group are mainly those in the upper percentiles.

b) The high standards adopted for these houses meant that the houses are of high habitable quality.

The above hypothesis, which evaluates the *habitability* of the houses, will be tested by the following sub-hypotheses :

(iv) Most beneficiaries are satisfied with the houses;

(v) Most beneficiaries are satisfied with the house prices; and

(vi) Most beneficiaries are satisfied with the monthly instalments .

c) The immense gap between the actual cost of producing the houses and their sales prices coupled with the poor rate of recovery makes the projects difficult to replicate.

The above hypothesis, which evaluates the *sustainability* of the programmes, will be tested by the following sub-hypotheses:

(vii) The actual costs of putting up these houses are more than double their sales prices;

(viii) The average arrears per household is nearly half its average monthly income; and

(ix) The amount of money due to be repaid, assuming a full-recovery, is just a fraction of even the total costs of the projects.

d) All beneficiaries of these low cost houses, irrespective of their income group, have affordability problems.

The above hypothesis, which evaluates the *affordability* of the houses, will be tested by the following sub-hypotheses:

(x) Most households experience a decreasing rent-income ratio over a period of time, but among the poorer households the ratios have actually increased;

(xi) High original rent-income ratio, a trademark of the low income households, is one of the major causes of arrears;

(xii) The non-target group suffers from affordability problem and falls into arrears as much as the target group; and

(xiii) Income per capita, and not gross household income, is more influential in determining whether a household defaults or not.

As with all forms of social research the generalizability or applicability of the above hypotheses can be a problem. In order to overcome this issue, as well as to ensure reliability and validity, various data collection methods are used simultaneously to complement each other. For instance, surveys and sampling techniques provide their own ways of dealing with this problem, and when employed with contextualization[2] and descriptive strategy (Chapter Three) will add confidence to the research conclusion. Denzin (1978: 34) calls this - the use of more than one research tool to collect different data (see Table 4.2) - triangulation, and the greater the triangulation the greater the confidence on the observed findings. Each tool is used for a particular set of data best suited to it. This concept of triangulation is based on the assumption that any bias inherent in particular data sources, investigator and method, would be neutralised when used with other data sources, investigators and methods (Cresswell, 1994:174).

4.3 DATA COLLECTION

Two sets of data were collected for this study. The first was primary data which was collected in the field from three selected housing areas; and the second was secondary data collected from the Sarawak Housing and Development Commission's (SHDC) computerised data base. While permission from the SHDC was not needed for the collection of the first data set, approval was nevertheless requested purely as a means to involve them later when the actual survey was carried out. This subsequently was proven wise as their involvement - in terms of time, manpower and logistics - gave an air of officialdom and was instrumental in influencing the high

2 Providing the reader with the background information needed to make an informed decision.

rate of response among the respondents. The request for permission to collect both these data sets was duly given after approval was obtained from the State Secretary.

The author spent three months in Kuching to collect these data. The first month in Kuching was spent mainly as follows: a) in the State Reference Library and the State Archive (searching through documents and other printed materials) with the personal help of the State Librarian Mr. Bernard Solosa; b) discussing the questionnaire with Dr. Richard Ko, the chief statistician with the State Department of Statistics. The second month, soon after the New Year Holidays was spent on manually copying data from the Commission's computer data-base and, once determined in terms of type of information available, finalising the questionnaire, deciding on sample size and logistics. The final month was spent on the survey itself - training assistants (3 days), piloting to test reliability and validity (1 day for 50 households), actual survey (9 days), keying data into the PC and checking the data.

4.4 FIELD BASED DATA

The three housing projects implemented in Kuching by the Sarawak Housing and Development Commission under its Public Housing Schemes were used as the basis for this study. These three areas are the Siol Kanan Estate, the Batu Kawa Estate and the Istana Dua Estate. The areas have a total number of 630 units, 596 units and 683 units of housing respectively but the focus was only on the low cost housing units numbering 247, 374 and 324 units respectively, making a total of 945 housing units. The selection of households for the sample was done using simple random sampling, a technique which gives equal chance to each household of being included in the sample (Peil, 1983; Moser and Kalton, 1979).

The City of Kuching was selected for the study for a number of reasons. These are:

(i) Firstly, the SHDC headquarters is located here and its support was very much needed (and duly given). The author was given an office with all necessary facilities including access to the PCs, photocopy machines, telephones and fax machines, as well as help from all staff members including the Chief Executive Officer himself. Ten staff members and three office vehicles were put at the author's disposal for use during the survey itself;

(ii) Secondly, all three housing areas are within driving distance from the HQ (less than 10 minutes drive);

(iii) Thirdly, proximity to all government ministries and departments, the public library, and the state archive;

(iv) Finally, the focus of the study itself which looks at state provision of low cost housing in the urban context.

Strictly speaking, Batu Kawa Housing Estate lies outside the City's administrative boundary but is nevertheless selected as one of the case areas as it is within the catchment area of the City. Most of the residents commute to the City to their workplace. Geographically, it lies closer to the City Centre than any of the other two case areas. All the houses selected had been sold above the official ceiling of MR32,000. Nevertheless, all satisfied the definition of low cost housing as they met the necessary requirements as adopted by the Land and Surveys Department, i.e.:

(i) the project area exceeds 50 acres;

(ii) at least 30 per cent of the houses are low cost;

(iii) price for a low cost house does not exceed MR50,000; and

(iv) density does not exceed 12 to the acre (25 per hectare).

4.4.1 Population to be Sampled

The study involved sampling populations living in urban low-cost houses in three of the Sarawak Housing and Development Commission's so-called Public Housing Projects in the City and catchment areas of Kuching. The Public Housing Project is one of the five types of projects currently being pursued by the Commission for the low-income earners in the State, the others being Resettlement Schemes, Public Long House Projects, Loans to Individuals, and Sites and Services.

Of these five, the Public Long House Project is not relevant to the study as it is only implemented for rural areas (the only urban one planned for the City of Kuching was only recently cancelled). Of the remainder, Loans to Individuals and Sites and Services have only recently been launched and implemented mainly outside the major towns of the state. The Resettlement Scheme, on the other hand, has ceased to be implemented (the only one was completed in 1982). Only the Public Housing Project (construction of complete houses) has been and is still being actively implemented.

4.4.2 Sampling Heads of Households

Across the three project areas, the number of low cost housing units was 945. Although the planned overall sampling fraction was 1 in 3 representing a sample of 315 units, a working sampling fraction of 2 in 5 representing a sample of 397 was adopted in anticipation of non- or unreliable responses. This sample size was relatively high and was made possible because of the logistical support provided by the Commission. Zarkovich (1983) says that in most cases, the sample size is a matter of convenience than real justification, and mentions that 3 to 5 percent as routine sizes used in survey works.

4.4.3 Questionnaire Design

Since the survey aimed to collect aggregate household characteristics, a formal and structured questionnaire, based on simple and direct questions, was used to ensure uniform interviews. Where certain terms and concepts had to be used in the questionnaire, explanatory notes were provided to ensure consistency in response and to avoid unnecessary bias from the respondents.

The questionnaire was divided into three sections. The first section which made up the major part of the questionnaire asked about the socio-economic characteristics of the heads of households and their members. Some insights into their background and past tenure status were also included. The second looked at their socio-economic needs (and affordability) while the final part asked them about their opinions on their houses (see Appendix 4.1).

On arrival in Kuching, an approach was made to see the Chief Statistician, Dr. Richard Ko, of the State Department of Statistics to discuss the questionnaire. Many suggestions were given on how to improve the questionnaire and changes had to be made especially on the income and expenditure parts.

4.4.4 Sampling Design

The list of addresses for sampling was obtained from the Sarawak Housing and Development Commission's computer records. Since the sampling was to be carried out in three clearly marked project areas, logistics were not a problem as the Commission agreed to provide 10 assistants and 3 vehicles for use throughout the survey period.

Initial discussions with Dr. Ko suggested that a complete Census should be conducted due to the heterogeneous nature of the population of the State, which would determine the reliability of the quality of information particularly that relating to income and expenditure. However, due to time and cost constraints the sample size was limited to 40 per cent, the maximum possible. It must be highlighted that costs was greatly reduced due to the assistance provided by the Commission in terms of logistics and manpower, and even stationery. Nevertheless, some form of reward, although not demanded, was expected by the assistants. This proved to be a contentious issue with the SHDC officers as they viewed the exercise as official on the part of the assistants. Moreover, they did not want a precedent to be created where future social survey exercises (a new Research and Development Unit was established while the author was there) may be affected. In the end, only light refreshment and occasional lunches were provided and no financial reward was involved.

4.4.5 Questionnaire Piloting and Development

The questionnaire was piloted in the Batu Kawa housing estate on February 8, 1993. After piloting, only minor modifications and clarification to the parts on questions on income and willingness to pay were considered necessary. This allowed the pilot study to be used as part of the main survey, which itself was conducted three days later. The first required deletion of a number of questions relating to sources of secondary incomes. None of the respondents in the pilot survey had any, and it was confirmed with the SHDC that this source was not included in their calculation of household income. In order to standardise the income figures, and to enable comparisons to be made, such questions were excluded in the final questionnaire.

The second was a bit trickier in that it involves a lot of imagination on the part of the respondents. It must also be stated here that even some of the assistant found the questions incomprehensible. In any case, the respondents found it difficult if not impossible to comprehend a hypothetical situation where they have to forego their own house and move to an identical one elsewhere. Besides incredulous reactions, the main worry relates to the source of finance. Public servants, who make up the bulk of the households in the sample, are entitled to only one government loan in their lifetime. Nevertheless, this was solved by creating another hypothetical situation whereby they are entitled to another loan provided they sell the present house.

The pilot study conducted nullified the Census approach originally suggested. Although the population was highly heterogeneous, more than half were Malays. Two of the project areas

were overwhelmingly Malays[3] while the third was equally divided amongst the Chinese, Ibans, Bidayuhs and other indigenous groups with the Malays slightly in the majority.

4.4.6 Introductory Letter

At both the pilot and main stage of the survey, a letter (see Appendix 4.2) was sent to all houses selected for the sample a couple of days in advance of the start of fieldwork, except for the Siol Kanan Estate where the on-site staff member who was supposed to deliver the letters did not do so until the evening before.

Besides the introductory letters, the PRO Section of the Sarawak Housing and Development Commission contacted the Heads of the Neighbourhoods to inform them beforehand of the exercise and to ask their community to co-operate. The letter was issued on behalf of the Commission by the Research Officer who explained the nature of the survey, emphasising confidentiality and requesting co-operation. All survey assistants, who wore personal identifications from the Commission, were asked to introduce themselves politely and to explain to the respondents again, if and where necessary, the purpose and confidentiality of the survey.

4.4.7 Fieldwork Organisation

Personal briefings were held for all assistants working on the survey, to describe the background to the survey and explain both interview and contact procedures. These were done 2 days before the pilot interview. All assistants were educated to at least the lower secondary level and most have had experience in conducting social research surveys. Two female members were requested to be in the team in order to ensure greater co-operation from respondents especially when only female members of the households are present.

Batu Kawa area was selected as the first area for the following reasons. It was the most heterogeneous of the three areas, and the two female assistants did not feel 'secure' on their own. Thus, the author had to be around on the first day not only to give the two confidence, but it was also felt necessary to monitor progress, ensure proper implementation and to provide clarification in case any was required, although modifications and clarification had already been made immediately after the pilot survey. It was from the following day onwards that the author 'split'

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3 These two areas fall within the Native Land Category, and thus can only be sold to natives. The high incidence of Malays are due to the proximity of existing Malay settlements, which in normal cases attract more Malay applicants than other natives.

from the assistants, but within the same survey area, to conduct call backs in cases where no contacts or vague responses were made. A minimum of two call backs were made on working days, with the third being made in the evenings. The third and final call back was made by assistants who live in the same housing estate. The same approach was applied throughout the survey, whereby the author's role was to make call backs soon after the main survey was conducted, usually on the second and third day.

On making contact at the address, interviewers were asked to interview the head of household, spouse or close member of the household. Although some heads of households were not present during the actual interviews, responses were checked against the computer based data and if doubts persisted call backs were made to clarify responses. It was stressed again and again to the assistants that all questions refer to the particulars regarding the heads of the households. All housing units had only one household.

4.4.8 Fieldwork timing

The survey had to be conducted during office hours as all assistants were employees of the Commission, and it was felt that it would be difficult to convince them (although no attempt was made) to conduct the survey over the weekends. It was also felt that maximum co-operation could be better achieved tailoring the survey to their availability than to make them avail themselves to the survey. Two weeks were allocated for the survey including days for piloting and modifying questionnaires. However, because only minor changes were needed to be made to the questionnaire, and response rates was very high, only 10 days were actually used for the survey, one day for the pilot, four days for the main stage, and the rest was needed by the author to make call backs.

4.4.9 Data Processing

Completed questionnaires were then keyed into the PC using DBase. The day's completed questionnaires were checked and hand edited immediately after the day's survey was completed. Cleared responses were keyed into the computer in the evening, and incomplete responses were followed up the next day (or again the following day if the first call back failed to make contact).

4.4.10 Survey Response

Average response rate for the three areas was 92 per cent, with Siol Kanan recording the highest (93 per cent) and Batu Kawa the lowest (90 percent). A final 37 per cent sample size was achieved from the targeted 40 per cent.

Table 4.1 - Sample Profile

	Siol Kanan		Batu Kawa		Istana Dua		Total	
	Units	%	Units	%	Units	%	Units	%
Total units	247	100	374	100	324	100	945	100
Issued sample	99	40	150	40	130	40	379	40
Rate of return	-	93	-	90	-	92	-	92
Final sample	92	37	135	36	120	37	347	37
% of sample	-	27	-	38	-	35	-	100
Total h/hold	92		135		120		347	
Total persons	464		514		509		1487	

Source: Field Work, February 1993

4.5 COMPUTER BASED DATA

There were long delays in obtaining clearances because of reasons beyond everyone's control. The first letter requesting for permission was sent in April and after a few more reminders, including a facsimile by Dr. Graham Tipple, permission was finally granted in November, the week prior to the author's departure to Kuching. The delays were due to political and administrative changes being implemented in the State. At the time there was a complete change in personnel right from the State Minister of Housing, his deputy, the Permanent Secretary to the Ministry as well as the Chief Executive Officer. As well as that, the Chief Executive Officer of the Commission himself has to obtain written clearance from the State Secretary before permission could be given.

As if this was not enough, further complications were encountered in Kuching. As it was almost the end of the year, most senior staff were busy either putting the final touches to the year's book-keeping or putting together proposals for the coming year's budget. The Chief Executive Officer himself was busy familiarising himself with the activities of the Commission, which meant flying all over the State and seeing for himself what was being done on the ground. Worse, rumours were around that the Chief Minister himself was coming to visit the Commission, expecting a briefing from the Chief Executive Officer.

At the lower end, the officer in charge of the Commission's Computer Unit was seconded to follow the former Chief Executive Officer and he was the only one familiar with the computer system. Thus, the simple job of downloading the data from the mini-frame to a PC was not possible, and in the end, the data had to be printed in hard copy and keyed in manually into the PC.

At the outset it did seem that none of the Commission's staff could afford another intrusion in the form of an academic researcher, but it has to be said that their assistance and co-operation was never short in coming, without which the conduct of the field-survey and extraction of the computer based data would not have been possible.

Although the author was given complete freedom to collect all information related to the three areas selected, not all could be used due to two main reasons. First, only records of buyers who took their mortgage from the Commission were kept. Second, some of these buyers had no personal particulars recorded the reason being that they never put in any formal applications and, when they were offered houses, no attempts were made by the Commission to get hold of this information. This group of buyers are those who were offered houses based on the strong 'recommendations' of certain politicians that they know, more often than not their State Assemblyman.[4]

4.6 DATA MANIPULATION

Data collected from the SHDC's computer data base and from the field is analysed using the SAS statistical package. In order to do this, the respondents' data from the computer data base was first combined with that collected in the field and then analysed. However, there are instances where the whole data from the computer data base only will be used. Such cases include the identification of the number of applicants who were allocated houses without applying through the proper procedures and the number of households getting loans from the SHDC. Where comparative analyses are made, for instance, to compare the average original income of the households at the time when they first moved house and their average current income, then combined data based on the sample population is used. On the whole, much of the analysis will be based on the latter but, where they are not, qualifications will be made.

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[4] There was even a letter of support for an applicant from the highest office in the state, that of the *Yang Di Pertuan Negeri* or the State Governor.

Beside the use of these two sets of data, i.e., the overall computer-based data and the combined data based on the sample population, there are cases where data will be differently manipulated. This is done normally to satisfy a specific analytical objective or analytical technique. For example, in an effort to know why people default in their monthly payments, the defaulters are grouped into two categories. The first contain those who are three payments or less in arrears while those with more than this are grouped in the other category. The rationale for doing this will be expounded later in sub-section 4.6.2.a. Another example is where an analysis has to be made on the effectiveness of state housing investment. In the context of this research, only Siol Kanan and Batu Kawa are used in the calculations because:

(i) these two housing areas are more recent than Istana Dua and are almost of the same age, thus are reflective of the current policy of the SHDC and the prevailing market conditions;

(ii) beside being almost of the same age, both are also based on the same design and specifications, however, macro factors may exert differing costs and benefits that accrue to the actors involved in their production and consumption.

As previously described, the study is based on four main hypotheses focusing on four subject areas (measures) and along which the analyses will be made. These subject areas, the related analytical tools, the units of measurement and the variables used are outlined in Table 4.2. As research methods reflect assumptions about the individual, society, and the world (Popkewitz, 1984) the choice of research modes for this study are therefore deliberate. Like science, the objective of this study, as reflected in the hypotheses above, is to predict and control. It is thus constrained by the practice of objectivist epistimology, and consequently positivist in nature. As suggested by Firestone (1990: 122), positivism, unlike the other two research paradigms[5] which have critical stances, is based on a practical interest that facilitates control and instrumental action. Tipple and Willis (1990) concur by saying that positive statements are essentially about what is the case, and this is what this study is interested in getting at.

The positivist modes employed in this study are mortgage data, ratio analysis, net present value (also known as discounted cash flow or internal rate of return), regression analysis, and contingent valuation. These are used to complement and enhance the standard statistical analysis

5 Constructivism and Critical theory. The first is based on a practical interest in understanding the meaning of social action while the second has an emancipatory interest in reducing the distortions that stem from the contradictions between the first two interests (Bredo and Feinberg, 1982).

also used here, i.e., descriptive and inferential analyses. Each of these, together with the rationale behind their choices for this study, are summarily outlined below.

It must also be declared here that the freedom of access given by the SHDC to its complete mortgage data records for the three housing areas offered many temptations to reorient this research to centre on state theory (Evans *et al,* 1985). However, while a debate on the provision of low cost housing along these lines may contribute to state theory, it was also felt that it will only remain normative and will hardly help in solving the housing problem in the area studied. This was influential in the decision to adopt the positivist stance of this study and the slight political economy flavour in the approach. Nevertheless, this does not mean that the role of the state will entirely be excluded from the analysis as it is still possible to identify, using mortgage data analysis and net present value, particularly who profits from state subsidy and why, by how much, and who pays *et cetera.* As Klak succinctly states, mortgage data analysis has

> *'both theoretical and applied relevance. The research informs state theory by identifying the goals, allegiances, and limitations of the state. Concomitantly, it advises housing policy by identifying mechanisms responsible for low income programmes serving only a limited number of middle income households, and by suggesting modification'* (1990:96).

4.6.1 Mortgage Data Analysis

For a start, this analytical technique is tailor made for the kind of data that is available and for the goal of the research. At the same time the data can also easily tempt the researcher to steer the analysis towards a state-centred research focusing on state theory rather than state policy. Klak has pointed to this danger (or opportunity) when discussing the advantages and limitations of using such data by stressing that such data can direct 'the research along a certain analytical path that contributes much to the outcomes of the research' (Klak, 1990:96). Data obtained from mortgage records can provide two types of information. First, it provides quantitative evidence of who are being actively assisted by the state and this can be judged against its declared policy. Second, it provides detail information on the beneficiary covering matters such as his socio-economic background to his mortgage portfolio and personal financial management. Using mortgage data analysis, it is therefore possible to classify the beneficiaries in the computer based data according to their income status, i.e., to check whether they belong to the classified target group or not. Also, the comprehensiveness of the data enables an analysis to be made on the number of those who can officially afford these houses, the number having repayment problems, the number having arrears and by how much, their employment status and so on.

For this particular study the application of mortgage data analysis will be primarily focused on what Klak refers to as its 'applied relevance' which is to identify the actual beneficiaries of the low cost housing programmes and finding out the hows and whys of this in an effort to rectify the situation. In the context of this research, the main objectives of applying mortgage data analysis are, one, to measure whether the low income/target group's access to low cost housing has improved or not and, two, to identify the affordability of these beneficiaries (*Hypotheses 1, 3 and 4).*

4.6.2 Regression Analysis

Regression analysis is the analysis of the relationship between one variable and another set of variables. This relationship is expressed as 'an equation that predicts a *response variable* (also called a *dependent variable* or *criterion*) from a function of *regressor variables* (also called *independent variables, predictors, explanatory variables, factors,* or *carriers*) and *parameters.* The parameters are adjusted so that a measure of fit is optimised. The method most commonly used to estimate the parameters is to minimise the sum of squares of the differences between the actual response value and the value predicted by the equation. These estimates are generally known as the *least-squares estimates,* and the criterion value is called the *error sum of squares.* The response variable in this study is the arrears, while the independent regressor variables will be selected using stepwise regression, i.e., a regression process that eliminates variables with insignificant partial regression coefficients. For a detailed discussion on this see Afifi and Clark (1990), Belsley, Kuh and Welsch (1980), Bendel and Afifi (1977), Lewis (1973), Mallows (1973), SAS Institute Inc. (1989a, 1989b), Snee and Marquandt (1984). In this study two types of regression models are used, the multiple regression model and the logistic regression model.

4.6.2.a The Multiple Regression Model

The model is designed to explain variations in arrears for households across the three project areas; Siol Kanan, Batu Kawa and Istana Dua. Since the actual values of arrears are available from the survey information, the model takes the form of a classical regression model based upon a continuous response or dependent variable (Y) which is dependent upon a number of independent variables ($X_1, X_2, X_3 ....., X_k$) as follows:

$$Y_i = a + b_1X_{1i} + b_2X_{2i} + ... + b_kX_{ki} + u_i, \quad i = 1, 2, ...n$$

where the explanatory variables (X_1, ... , X_k) are either continuous or dummy variables. For this research, the defaulters are classified into two groups. The first group will consist of defaulters who are 4 months or more behind in their monthly instalments while the second group is made up of those with three months' arrears and less.

The reason for doing so is to test the assumption that different factors contribute to the causes of arrears for each group. For instance, arrears at an early stage of moving house may be caused by extra expenses needed at such times. Such determinants may disappear over time once the households have properly settled down and once their household financial management have come under control. Once this happens, other variables or 'real' determinants of arrears will appear. Likewise, although the initial 'determinants' may have disappeared over time, their effects could still be felt. In this case the current arrears of the households may have been caused by the accumulation of these initial arrears.

4.6.2.b Logistic Analysis

While the above multiple regression model identifies the determinants or causal variables of arrears, this logistic regression is used to identify predictive variables of arrears. This is done by firstly classifying the household sample, in this case those from Istana Dua, into one of two populations, i.e., those with arrears and those without. The choice of Istana Dua only is dictated by the fact that, as exhibited in the output of the multiple regression analysis above, it is not only a major contributor to the number of defaulters but also the amount of arrears for the three areas. Further, its age, which is almost 12 years, makes it a better sample for assessing the probability of becoming defaulters than the other two, both of which have only been completed within the last three years. For instance, those in the newer housing areas may default since they may have overstretched their financial capability because of other commitments which are usual around this period of moving into new houses. They may have used their savings or taken extra loans or used the money that should have been put aside for the instalments either to renovate their houses, buy new furniture, or to pay the deposit for the house earlier on. This extra burden may or may not continue to exist after five years, but in normal cases loans taken for these purposes

would have been settled within five years at the most.[6] For these reasons, it is felt that a study on the probability of becoming defaulters and the explanatory variables would produce more reliable and valid results if carried out among those who have lived in their houses longer than five years.

The array of variables, both discrete and dummies, used in the multiple regression before this can be used to predict whether or not a household will default in its mortgage repayments. This analysis can predict which independent variables best predict inability to pay. The equation for this regression takes the same form as the multiple linear regression and is as follows (Affifi and Clark, 1990):

$$\ln(\text{odds}) = a + b_1X_1 + b_2X_2 + \ldots + b_PX_P$$

where ln(odds), referred to as *logit,* is the probability of defaulting.

In the context of this research, the application of these two analytical techniques enable us to find out the reasons why people default in their mortgage repayments, as well as to predict the likelihood of a household to fall into arrears. In doing so, better judgements can be made on a household's affordability level especially when the results are synthesised with the findings made using mortgage data analysis described earlier and ratio analysis which will be described after this (*Hypothesis 4).*

4.6.3 Ratio Analysis

Ratio analysis is a tool which can be used to assess the credit-worthiness and affordability of a mortgagee (Landeau, 1987; 1991). Two types of ratios are used, the rent to income ratio, commonly known as the RI, and the price to income ratio, also known as the PI. Of these two, most countries use the rent to income ratio in their financial decisions to approve loan application.

4.6.3.a Rent-Income Ratio

This is based on the amount (principal plus interest) that a mortgagee has to pay expressed as a percentage of his income, either monthly or yearly. This ratio is supposed to measure the

6 Such loans are normally taken in the form of a personal loan and finance institutions usually give a maximum of five years for it to be settled.

household's ability to repay. It is based on the assumption that any household whose housing expenditure falls within the ratio fixed by the state is deemed to be able to afford to pay for the house. Likewise, any household that spends over and above this bench mark is considered to have an affordability problem.

Table 4.2 - Summary of Units and Methods of Analysis

Measure	Analytical Method	Indicators Analysed	Variables Measured
Accessibility	Mortgage Data	Beneficiaries	Income Levels Occupation Education Sex Race Origin Age Household Size Loan Source Monthly Instalments Density
Habitability	Contingent Valuation	Consumer Satisfaction Willingness to Move Willingness to Pay	Satisfaction (House, Rent, Price) Desire to Move House Willingness to Pay Changes (Percent, Location) Changes (Types, Costs)
Sustainability	Net Present Value	Subsidy Net Costs/Benefits Cost Recovery	Sales Price Quantifiable Costs Unquantifiable Costs
Affordability	Mortgage Data	Incidence of Arrears	Defaulters Arrears (Amount, Months)
	Linear Regression	Determinant of Arrears A (Arrears of 4 month or more)	Income Per Capita Length of Stay Original Age Rent-Income Ratio Income Group, and others
		Determinant of Arrears B (Arrears of 3 months or less)	Income Per Capita Length of Stay Original Age Rent-Income Ratio Income Group, and others
	Logistic Regression	Likelihood of Defaulting (Istana only)	Income per Capita Length of Stay Original Age Rent-Income Ratio Income Group, and others
	Ratio Analysis	Rent-Income Ratio	Ability to Pay - Expressed Rent-IncomeRatio - Original/Current
		Price-Income Ratio	Price-IncomeRatio - Original/Current

4.6.3.b Price-Income Ratio

The second technique is less widely used but will nevertheless be applied in this study to further support the first technique. This ratio is defined as the house purchase price divided by the mortgagee's annual income and is stated in years of income. The ratio is a reflection of the household's ability to afford ownership of the house and deals with his assets management.

While the rent-income's simplicity and consequential drawbacks are recognised, it is still adopted for this study as it is used by the SHDC and the Malaysian Government in assessing borrowers' credit-worthiness. Furthermore, all respondents are house owners and thus would reflect the actual behaviour of would-be house purchasers. The application of both these techniques on the type of income data of the sample population collected in the survey stage (original and current household income) allows an analysis to be made on the changes in the levels of rent-income ratio and price-income ratio, which will have a bearing on the debt-servicing policy of the lending institution. Also, when correlated to levels of arrears, it is possible to check whether the adopted levels of rent-income ratio and price-income ratio are good measures of borrowers credit-worthiness and affordability. All in all, within the context of this research the main purpose of applying this technique of analysis is to identify the affordability levels of the beneficiaries, thus complementing the mortgage data analysis and the two regression analyses described above *(Hypothesis 4)*.

4.6.4 Contingent Valuation

This technique is basically an approach which attempts to explore the willingness of a respondent to pay for a certain good in a hypothetical market. In most documented studies where this approach is used, the objectives were to identify the levels that the interviewees were willing to pay for services which they have not had, and which would improve their quality of life significantly. In the context of this study, the approach is very different in that the respondents are asked their willingness to pay for something that they already have and are of similar quality.

The purpose of carrying out this mode of survey is to find out whether these respondents are willing to move to a similar houses elsewhere. Whether they do or not, their willingness to pay to move to those houses would reflect their satisfaction with their current houses. These responses, when combined with the results of standard descriptive and inferential statistical analyses, would give an insight into the high standards and quality of the houses that they are provided with *(Hypothesis 2)*.

4.6.5 Net Present Value

Net present value is used in this study not to compare alternative government housing programmes, but to analyse the efficiency of investments and equity of social programmes (Malpezzi, 1990a: 208). Net present value is based on discounted cash flow analysis. Put simply it calculates present values by adding the net costs and benefits that accrue from an investment after discounting them. The discount process is based on the assumption that a unit currency tomorrow is worth less than a unit of the same currency today. Thus a result that is greater than zero means that the present market value of the product exceeds the present market costs, meaning the investment is profitable.[7] The net present value model can be applied to all rental, sales, or lease with option to buy accommodation. For this study, only the second version is used as all units were for sale. As a matter of expediency, all figures used in the calculations refer to intermediate units only as they form the majority of the units and they all have standard specifications. As well as that, only the Siol Kanan and Batu Kawa housing areas are used because being more recent than Istana Dua they are a manifestation of the current market situation as well as the present practice of SHDC.

The use of this technique is to complement the findings made by the various analytical techniques described earlier. Having identified the beneficiaries through the application of mortgage data analysis, the affordability levels of the beneficiaries using ratio analysis and regression analyses, the high quality of the houses and the great satisfaction of the beneficiaries using contingent valuation, net present value enables the calculations of the actual costs and benefits that accrue not only to these beneficiaries, but also to the SHDC and the overall economy, to be made. From these calculations, it is also possible to assess the economic viability of such programmes and to confirm the affordability level of the target population by using the price-income ratio as a measure. In other words, this analytical technique can assess how efficient the housing investments are and to pinpoint who benefit and by how much. It will also show the actual costs of providing the high quality houses which have caused the high degree of satisfaction amongst the beneficiaries *(Hypothesis 3)*.

4.7 LIMITATIONS OF THE STUDY

This study is confined to the case study of the SHDC and its housing activities around the City of Kuching. As made clear in the beginning, the generalizability of the findings is one of the aim of

[7] For a detailed explanation of this model see Malpezzi (1988, 1991)

this study, where possible, but it is not the prime objective. The use of random sampling is also a limitation, though McGrath (1982) has declared it as one of three tactics employed to add credence to the judgement of applicability, the other two being replication (Keiss and Bloomquist, 1985) and thick description (Lincoln and Guba, 1985). Firestone (1990) lists out two arguments against random sampling, the first is generalisation beyond the population technically sampled to some even larger population and, the second is predictions are only accurate when other things are being equal, and which in reality are not. Related to this randomness issue is the normality assumption which is rarely found in real life. However, as described in Section 4.4, every effort was made to ensure that the sample population was selected as random as possibly can and its size as large as possible to ensure its applicability (Kerlinger, 1973:5).

CHAPTER FIVE

CHAPTER FIVE

ACCESSIBILITY OF THE TARGET GROUP AND HABITABILITY OF THE HOUSES

5.0 INTRODUCTION

This chapter sets out to analyse the performance of state intervention in the urban low cost housing market with a view to assessing the quality of these houses and the accessibility of the target population to them. All these are done based on a survey carried out in the month of February 1993 on three housing estates, focusing on complete low cost units only, constructed by the Sarawak Housing and Development Commission (SHDC) in the City of Kuching, the State's capital.

It firstly examines the economic status of the successful purchasers at the time when they were first offered these low cost houses. This is to prove or disprove that these houses have indeed benefited the target group as defined. The second objective of this chapter is to find out how well received these houses are by these beneficiaries and discuss the habitability of these houses based on the satisfaction factor given by respondents in respect of three determinants, i.e., the houses, the house prices and the monthly instalments. Judging from the quality and the prices of these houses, plus the extremely stiff competition in getting them, one would be excused for assuming that the degree of satisfaction among house owners would be very high.

The discussion on the response is structured around the comparison between target and non-target group, satisfied and dissatisfied respondents, and between the three individual estates. Any inconsistent findings in other categories, for instance between satisfied and dissatisfied respondents within and outside the target group are also highlighted where necessary. This chapter will therefore tests the first two of the four main hypotheses described in Chapter Four, and they are:

a) The low cost housing units built by the SHDC in the urban area of Kuching have not benefited the identified target group.

The above hypothesis, which evaluates the *accessibility* of the target group to these houses, will be tested by the following sub-hypotheses :

(i) Some beneficiaries have been allocated houses not based on eligibility criteria but because of political interference;

(ii) The low cost houses have benefited a great proportion of households from outside the target group; and

(iii) The beneficiaries that fall within the target group are mainly those in the upper percentiles.

b) The high standards adopted for these houses meant that the houses are of high habitable quality.

The above hypothesis, which evaluates the *habitability* of the houses, will be tested by the following sub-hypotheses :

(iv) Most beneficiaries are satisfied with the houses;

(v) Most beneficiaries are satisfied with the house prices; and

(vi) Most beneficiaries are satisfied with the monthly instalments.

5.1 CHARACTERISTICS OF BENEFICIARIES

Although the SHDC's data base does not keep a comprehensive record of its mortgagees[1] it does however keep full information on their accounts especially the amount of their loan, their monthly instalments, and their number and amount of arrears. Except for those who were not allocated houses through the normal procedure, the SHDC also keeps records of the applicant's, as well as his or her spouse's, monthly income at the time of application.

It must be stressed from the beginning that although Bank Negara[2] has issued a clear guideline on how mortgage applicants are to be processed, the SHDC has, from its inception, never adopted it. First, age is not a constraint to the SHDC. For example, ideally an applicant should not be more than 30 years old when applying as this would allow him to make use of the 25-year maximum repayment period. However, an SHDC mortgage borrower who is older will still be allowed a maximum of 25 years to settle. For instance, a 50-year old borrower would still be able to pay

1 Some mortgagees do not have full personal records in the data base. These were allocated houses through political links (usually with a supporting letter from his or her political representative).

2 The Federal Bank of Malaysia.

the loan in 25 years instead of only 5 remaining years of his 'paid' working life. The SHDC's official stance is that the borrower's children will happily take over the responsibility once he has retired. The possibility that some buyers may have childless marriages, have children too young to work or in poor paying jobs is not considered. Moreover, quite a good proportion of the borrowers are in high risk jobs, especially the military, whose terms are renewable every five years. The youngest age of the borrowers at the time of borrowing were 24, 21 and 21 years old respectively in Siol Kanan, Batu Kawa and Istana Dua while the oldest were 57, 55 and 56 years old[3].

Second, the MR750 maximum income limit has not been strictly adopted. If the applicant's income alone is used, 31 percent, 30 percent and 14 percent of the borrowers in Siol Kanan, Batu Kawa and Istana Dua respectively would not have qualified as they were earning more than MR800 a month when applying. The figures in fact are higher (65, 68 and 72 percent respectively) since the SHDC bases its selection on the joint incomes of the household.

Third, the 33 percent rent-income ratio is seldom used and this is very evident with very young borrowers who have just started work. Rent-income ratios above this limit, based on applicant's income only, are present in 41 percent, 42 percent and 30 percent households respectively for Siol Kanan, Batu Kawa and Istana Dua. Even when both incomes are used, the figures are still relatively high, i.e., 23 percent, 25 percent and 18 percent. The aggregate percentage for the whole three areas is 38 percent based on the applicant's income only and 22 percent based on both incomes. The only parameter that the SHDC insists on is the ability to pay 5 percent down-payment which every buyer has to pay irrespective of the house price. Three generalisations can be made from the above observations:

a SHDC has allowed the better off to compete with the poor for low-cost houses. Based on the applicant's income alone, at least three-tenths of the buyers are not entitled to their houses as their monthly income exceeded the MR750 cut off point;

b But on a positive note, the same liberal approach to implementing the policy has allowed more than a fifth of the owners to own houses which, strictly speaking, they are too poor for as their rent-income ratio exceeded the 33 percent limit; and

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3 These retired heads of households are heads of some of the dual income households, whose pensions plus their spouses' income - treated as household incomes - are high enough to satisfy eligibility requirements.

c Again the liberal interpretation in giving loans without considering the age of applicants has encouraged borrowers to borrow from the SHDC instead of their respective employers since with the SHDC they could spread their loan repayments to the maximum although at a slightly higher rate of 5.5 percent as compared to the government's 4 percent. Between the years 1988 and 1990 the annual amount of loans to house purchasers ranged between MR90.5 million and MR97.3 million.

Table 5.1 - Loan Characteristics of SHDC's house buyers.

	Siol Kanan		Batu Kawa		Istana Dua		All Areas	
Mortgagees	Units	%	Units	%	Units	%	Units	%
Total	247	100	374	100	324	100	945	100
Non-SHDC	18	7.3	35	9.4	72	22.2	125	13.4
SHDC								
Without details	22	8.9	93	24.9	29	8.9	144	15.2
With details	207	83.8	246	65.7	223	68.9	676	71.4

Source: Field work, February 1993.

Table 5.1 shows the detailed breakdown. Of the three housing estates Istana Dua has the highest percentage of buyers (22 percent) who have either paid off their loans or have secured the loans from other sources. Siol Kanan and Batu Kawa has 7 percent and 9 percent respectively. Of the buyers who have applied through the normal process and who have taken SHDC loans, the highest concentration is in Siol Kanan (84 percent) followed by Istana Dua (69 percent) and Batu Kawa (66 percent). For the overall sample population, 71 percent are those who are borrowers with the SHDC and have applied for the houses in the normal procedure, 13 percent have either settled their loans or have borrowed from another source, and the remaining 15 percent are those who are borrowers with the SHDC, but were allocated houses through political backing[4], thus supporting our first sub-hypothesis that *'some beneficiaries have been allocated houses not based on eligibility criteria but because of political interference'.*

For the discussions on rent-income and price-income ratios in the later section of this chapter only respondents with available full personal details are used due to the absence of the income data for the other mortgagees.

4 Although it is suspected that parastatal agencies practised political clientelism, few studies have been actually carried out to prove this point. The affirmative finding in this case concurs with that of Kwaku (1977) and Agus (1986). While Kwaku's study is similar in that it looks at a housing agency, in this case the Ghana Housing Corporation, Agus's work looks at political interference at the local level where the local authorities apply two sets of quota for housing allocation, one for race and another for political allegiance.

5.2 GENERAL CHARACTERISTICS OF RESPONDENTS

The following Table 5.2 shows the population distribution of our sample and that of the total stock of low cost housing in the areas studied. Although there are differences these are small: overall the spread of interviews is reasonably typical. The response rate received was fairly balanced, ranging from 90 percent to 93 percent, resulting in a final sample of 37 percent for all the three areas, and 37, 36 and 37 percent for Siol Kanan, Batu Kawa and Istana Dua respectively.

Table 5.2 - Sample Profile

	Siol Kanan		Batu Kawa		Istana Dua		All Areas	
	Units	%	Units	%	Units	%	Units	%
Total units	247	100	374	100	324	100	945	100
Planned sample	99	40	150	40	130	40	379	40
Rate of return	-	93	-	90	-	92	-	92
Final sample	92	37	135	36	120	37	347	37
% of sample	-	27	-	38	-	35	-	100
Total households	92		135		120		347	
Total persons	464		514		509		1487	

Source: Field Work, February 1993

5.2.1 Sex of Respondents

The respondents in the sample survey consists of 93 percent males and 7 percent females. Males are over-represented because the interviews were mainly conducted with household heads, and only when household head was not available, the spouse or some other adult member of the family was then interviewed instead. There was no single person household nor many one parent households headed by a female.

Table 5.3 - Sex of Respondents

(percent)	Siol Kanan	Batu Kawa	Istana Dua	Overall
Male	96.7	93.3	93.3	93.1
Female	3.3	6.7	6.7	6.9

Source: Field Work, February 1993

5.2.2 Age of Respondents

The youngest head of household interviewed was aged 23 and the oldest 62. The spread of ages between these two extremes was far from even. Around a third were aged under 35 while less

that 5 percent was over the age of 55. Very roughly, one in every three respondents were aged under 45, one in every five were aged 46-55 and only 2 percent of the respondents aged 25 or under. The highest incidence of respondents aged 55 and over (9 percent) were found in Istana Dua while Siol Kanan had the largest number of respondents aged 45 and below (87 percent).

An explanation for this heavier concentration of older population in Istana Dua is because this particular estate is the oldest of the three, completed in 1982, while the other two were only completed in the last 3 years. The average age of the respondents was 41.1 years. As expected, Istana Dua has the highest individual average (43.4 years) while Siol Kanan has the lowest (38.3 years).

Table 5.4 - Age of Heads of Household by Location

	Siol Kanan	Batu Kawa	Istana Dua	All Areas
Not known	1.1	3.9	0.0	2.1
<25	1.1	3.9	3.9	1.8
26-35	36.3	33.4	28.7	29.6
36-45	48.9	35.2	36.4	40.0
46-55	10.3	18.6	21.8	22.1
>56	2.3	4.9	9.3	4.3
Mean (current)	38.3	41.1	43.4	41.1
Median (current)	38.0	40.0	44.0	41.0
Mean (original)	36.3	36.0	36.6	36.3
Median (original)	36.0	35.0	35.0	36.0

Source: Field Work, February 1993

5.2.3 Ethnic Origin

When asked for their ethnic origins the majority (69 percent) of those interviewed described themselves as Malays. There were 9 percent Ibans and 8 percent Chinese. The remainder were divided amongst the various ethnic groups collectively referred to as other indigenous, including some Indians. The number of respondents falling into these groups was too small to allow for separate analysis.

The proportions of the ethnic groups in the sample does not reflect the actual distribution pattern in the State. The Ibans and the Chinese are very under-represented while the Malays are overtly over-represented. The explanation for this is that two of the estates, the Siol Kanan and the Istana Dua, are in areas classified as Native Lands under the Land Code. Except for the natives, others are excluded from owning any part of this land which explains the low incidence of

Chinese households. The two estates are also in areas which are traditionally Malay settlements and in fact are extensions of the existing Malay settlements in the locality. Under such circumstances very few applications are expected from the other ethnic groups.

Table 5.5 - Ethnic Origin

(percent)	Siol Kanan	Batu Kawa	Istana Dua	All Areas
Chinese	0.0	20.6	0.0	7.5
Ibans	3.4	22.5	0.0	9.3
Malays	86.4	29.4	96.7	68.9
Others	10.2	27.5	3.3	14.3
Total	100.0	100.0	100.0	100.0

Source: Field Work, February 1993

Compare this with the ethnic distribution in Batu Kawa Estate where the proportion of the Chinese and Iban households are 21 and 23 percent respectively.

5.2.4 Education Level

The education system in Malaysia is basically aimed at achieving three levels of educational attainment, namely primary, secondary and tertiary. It takes 6 years in school to complete primary education, 3 years to complete lower secondary education, 2 or 4 years to complete upper secondary education and 3 years or more to complete tertiary education. Since only about 3 percent of the respondents had their tertiary education in universities or colleges, the discussion on the education level in this section will be confined to only primary and secondary education. Moreover, none of the few highly educated respondents are owner-occupiers. The education level among the heads of household is shown in the following table. Only 1 percent of the total respondents had no formal education. Most of them were found in the Istana Dua which is to be expected, while Siol Kanan has the distinction of have none. Slightly more than a third (35 percent) had primary education and three in five had secondary education.

Table 5.6 - Educational Level

(percent)	Siol Kanan	Batu Kawa	Istana Dua	All Areas
Unschooled	0.0	0.7	1.7	1.1
Primary	28.3	38.5	40.0	35.0
Secondary	68.4	59.3	55.8	61.4
College	2.2	1.5	1.7	1.8
University	1.1	0.0	0.8	0.7

Source: Field Work, February 1993

A further breakdown of the data reveals the more educated were to be found in the most recent of the three areas where 68 percent of heads of household had secondary education compared to only 56 percent in the oldest estate. The opposite is shown in the education level of heads of household at primary school level. Two in five were educated up to this level in the oldest estate as compared to three in ten in the most recent. This is the expected distribution as Siol Kanan, being the newest, would naturally contain a younger generation who would normally be better educated.

5.2.5 Household Composition

In the sample 13 percent were households of three people or less, 60 percent between 4 and 6, 26 percent between 7 and 9, and 1 percent of ten or more. The largest household was 13 people while the smallest was 2.

Istana Dua, being the oldest, has the largest concentration of households having a household size of 7 and above (33 percent) while Siol Kanan, being the youngest, has (19 percent). On the other hand, Istana Dua's share of the household size of less than 4 is the lowest among the three (11 percent). The average household size of 5.5 for all the three areas was higher than the national, the state and the city's average of 4.9, 5.0 and 5.3 respectively (1990 figures). This household size, however, has only seen a marginal increase from the original average of 5.4, although both Siol Kanan and Batu Kawa showed a marked increase from 5.0 to 5.4. This was balanced out by the decrease from an average of 6.4 to 5.9 for the Istana Dua Estate due to its older age profile, where some of the children have moved out to set up their own life.

Table 5.7 - Household Composition

(percent)	Siol Kanan	Batu Kawa	Istana Dua	All Areas
Less than 4	13.6	15.7	11.1	13.6
4 - 6	67.0	57.8	55.6	60.0
7 - 9	19.4	26.5	31.1	25.7
10 and over	0.0	0.0	2.2	0.7
Mean (Current)	5.4	5.4	5.9	5.5
Median (Current)	5.0	5.0	6.0	5.0
Mean (Original)	5.0	5.0	6.4	5.4
Median (Original)	5.0	4.5	6.0	5.0

Source: Field Work, February 1993

As expected, the average household size in Istana Dua was the highest with 5.9. The high figure may be explained by the nature of its population which comprised mainly of older heads of

households. The average size for the other two areas, although far lower than Istana Dua, are still above the national average and may be explained by the high percentage of indigenous population, especially Malays and Ibans who tend to have large families.

Table 5.8 - Average Household Size, 1990/1993

Malaysia	4.9
Sarawak	5.0
Kuching	5.4
Siol Kanan (93)	5.3
Batu Kawa (93)	5.3
Istana Dua (93)	5.9
All sample (93)	5.3

Source: Sarawak (1991b)

5.2.6 Previous place of residence

Table 5.9 - Previous Address

(percent)	Siol Kanan	Batu Kawa	Istana Dua	All Areas
Kuching	82.6	88.9	80.7	84.5
Outside Kuching	17.4	11.1	19.3	15.5
Total	100.0	100.0	100.0	100.0

Source: Field Work, February 1993

True to the policy adopted by the Commission, the majority of the households (85 percent) previously lived in Kuching with 80 percent giving Kuching as their place of birth, indicating a fair level of migration to the City either due to employment or for family reason. Of these households most would be the Ibans, being rural dwellers and concentrated in the Second and Third Divisions of the State. The next category would be the Melanaus who are coastal dwellers and mainly distributed along the coasts of the Third, Fourth, Fifth and Sixth Divisions. The rest of the households would be made up of those categorised as 'other indigenous', mainly the Orang Ulus who are found mainly in the interior.

Table 5.10 - Place of Birth

(percent)	Siol Kanan	Batu Kawa	Istana Dua	All Areas
Kuching	79.5	68.6	78.9	75.4
Outside Kuching	20.5	31.4	21.1	24.6
Total	100.0	100.0	100.0	100.0

Source: Field Work, February 1993

5.2.7 Past and Present Tenure

16 percent of heads of households lived outside Kuching before moving to the present accommodation. The rest, who all lived in Kuching, were distributed as follows, 22 percent owned their previous accommodation, the highest number - 37 percent - were staying with their relatives, 24 percent were living in rented accommodation and only 1 percent were squatters before they moved to the present accommodation.

Table 5.11 - Status at previous and present residence in Kuching

(percent)	Siol Kanan		Batu Kawa		Istana Dua		All Areas	
	Past	Pres	Past	Pres	Past	Pres	Past	Pres
O/occupiers	19.6	93.5	23.7	93.3	21.8	90.0	22.0	92.0
Renters	17.4	6.5	40.0	6.7	11.8	10.0	24.3	8.0
Squatters	0.0	1.1	1.5	0.0	0.8	0.0	1.2	0.0
With relations	44.5	0.0	23.7	0.0	46.2	0.0	37.0	0.0
Not applicable	17.4	0.0	11.1	0.0	19.3	0.0	15.5	0.0
Total	100	100	100	100	100	100	100	100

Source: Field Work, February 1993

Istana Dua has the highest concentration of households from outside Kuching (19 percent) followed by Siol Kanan (17 percent) and Batu Kawa (11 percent). The same observation is seen in the number of those households from Kuching and who were staying with relatives, 46 percent, 45 percent and 24 percent respectively for Istana Dua, Siol Kanan and Batu Kawa. It is only in the proportion of owner-occupiers and households in rented accommodation that Batu Kawa led the other two, where 40 percent were in rented private accommodation and 24 percent owner-occupiers. In the other two housing estates, the figures for households in rented accommodation were only 12 percent for Istana Dua and 17 percent for Batu Kawa. The proportion of owner occupiers were not too far behind, 22 percent and 20 percent respectively.

Today 92 percent of the respondents are house owners while the rest are tenants. The highest concentration of tenants was found in the Istana Dua (10 percent) while the lowest, 7 percent, was in the Siol Kanan. Most of these tenants were of West Malaysian origins, working in Kuching as teachers (Siol Kanan), policemen (Istana Dua) or soldiers (Batu Kawa).

5.2.8 Types of Previous and Present Accommodation

The majority of the households lived in very different types of accommodation to those they are currently in. Of the 85 percent who said they had lived in Kuching before moving to the present

houses, almost half of these lived in traditional houses (47 percent), followed by 19 percent who lived in government provided quarters (Table 5.12). Quarters for lower grades civil servants are usually built as traditional Malay detached houses or Iban modified longhouses and of timber, except for the Police and Military who are housed in high rise concrete flats.

In the three areas, Istana Dua has the highest proportion of households who used to lived in traditional houses indicating the high percentage of intake from the nearby Malay settlement. Batu Kawa, which has the lowest (34 percent), has the highest proportion of those who previously lived in Government Quarters (22 percent). The bulk of these would be military personnel, and Ibans. This is reflected in the higher incidence of Iban heads of households (Table 5.5) as well as those were born outside Kuching (Table 5.9)[5].

Table 5.12 - Type of previous accommodation

(percent)	Siol Kanan	Batu Kawa	Istana Dua	All Areas
Traditional Houses	50.0	34.1	58.0	46.5
Semis/Detached	0.0	4.4	1.7	2.4
Terraced houses	9.8	22.2	5.9	13.4
Others	2.2	6.0	0.8	2.9
Quarters	20.6	22.2	14.3	19.3
Not Applicable	17.4	11.1	19.3	15.5

Source: Field Work, February 1993

Presently, all respondents are housed in single-storey terraced houses of roughly the same floor area. Houses in Istana Dua differ from those in the other two areas, both of which are based on the same design and specification. As such the houses can only be differentiated by their location, either intermediate or end units. Although the end units are provided with a generous piece of land at the end of the buildings, they are still very constricted in terms of space as compared to their previous houses. Currently, 32 percent of the respondents live in end units.

Table 5.13 - Type of current accommodation

(percent)	Siol Kanan	Batu Kawa	Istana Dua	All Areas
End Units	39	33	24	32
Intermediate Units	61	67	76	68
Total	100	100	100	100

Source: Field Work, February 1993

5 The Ibans are mainly found in east of the Second Division of the State. Very few Ibans are found in the First Division.

5.2.9 Rentals of Previous and Present Accommodation

Only 45 percent of these households were making any forms of formal payments toward their previous housing. The rest were either staying with their relatives or living in squatter accommodation, neither of whom said they made any monetary contribution toward the accommodation. Of these, 21 percent were living in government quarters while the remainder (24 percent) were renting in private houses. The average rent paid by renters was MR175 per month. Surprisingly, respondents in Istana Dua - who stayed in rented accommodation in the late '70s - claimed to have paid higher average rentals (MR198) than the those in the other two - who rented in the late 80's (MR173 and MR170).

Table 5.14 - Average rentals at previous accommodation

(percent)	Siol Kanan	Batu Kawa	Istana Dua	All Areas
Private tenants	172.5	169.5	197.9	174.8

Source: Field Work, February 1993

The average monthly amount paid by the respondents for their current accommodation was MR197, the highest being in Siol Kanan at MR203 and the lowest MR184 at Istana Dua. When making comparisons between rentals paid in the previous and present accommodation, it must be remembered that a significant number i.e. 19 percent of sample population and more than a fifth each in Siol Kanan and Batu Kawa, were government servants staying in government provided quarters. Since they are required to a pay a nominal sum for the upkeep of the quarters, and if these payments are counted as rentals, the average as shown in Table 5.15 would be lower.

Table 5.15 - Average Monthly Housing Cost

(MR)	Siol Kanan	Batu Kawa	Istana Dua	All Areas
Mean (Owners)	203.4	202.8	183.9	196.7
Median (Owners)	190.0	190.0	212.0	190.0
Mean (Renters)	196.7	192.2	315.0	249.6
Median (Renters)	200.0	200.0	325.0	200.0

Source: Field Work, February 1993

Table 5.15 also shows the average monthly rentals that tenants (8 percent of the sample population) paid for the houses. Istana Dua commands the highest mean monthly rental (MR315), probably due to its close proximity to the City and associated services. The amount is 70 percent more than the average monthly payment in the other two areas.

5.2.10 Density

Density standards in Malaysia should be looked at in a more generous way than for a Western country. This should not be seen as an excuse for lower standard but as a realistic approach to understand the problem of overcrowding in developing countries. As will be shown later, the occupancy per room is more than 2 but is acceptable in a country like Malaysia as culturally and economically people have always had a large-sized family and 'number of persons per room' does not usually come into their calculation except among the educated and urbanites. Even among this latter group, especially the Malays, large families are still fashionable. On top of the cultural and economical factors, their Islamic faith also has a bearing on family size as Islam opposes family planning. Besides this, climatic influence sometimes nullifies this formal need for bedrooms and whole families commonly sleep in the sitting room.

Table 5.16 - Floor space

Space	Siol Kanan/Batu Kawa	Istana Dua
Living/dining	33.5 sq. m.	16.0 sq. m.
Bedroom 1	9.3 sq. m.	13.4 sq. m.
Bedroom 2	9.3 sq. m.	10.0 sq. m.
Kitchen	11.2 sq. m.	6.0 sq. m.
Bath/toilet.	4.5 sq. m.	0.3 sq. m.
Total	34.3 sq. m.	29.7 sq. m.

Source: Sarawak Housing and Development Commission.

All the houses have 2 bedrooms, a living-cum-dining room, a kitchen and bath/toilet, but the floor area differs. Houses in Siol Kanan and Batu Kawa are based on one standard design with a floor area of 67.6 sq. m. while those in Istana Dua are much smaller with a floor space of 49.1 sq. m.

5.2.11 Persons per Room[6]

86 percent of the households were in accommodation where there were at least two or more people to a bedroom. Istana Dua, being the estate with older age groups and bigger household size, has the highest proportion (89 percent) while Batu Kawa has the lowest (84 percent). A look at the relationship of rooms to people in the accommodation in which respondents are currently housed suggests that the greatest pressure for space was in Istana Dua with an average number of persons per room of 2.9 for the whole estate and 3.1 for end units (as compared to 2.9

6 Room here refers to bedroom.

for intermediate units). All three figures are higher than both the other two housing estates. Figures for the whole sample population are 2.7, 2.7 and 2.8 persons per room for all units, intermediate units and end units respectively.

Table 5.17 - Persons per Bedroom

	Siol Kanan		Batu Kawa		Istana Dua		All Areas	
(percent)	Past	Present	Past	Present	Past	Present	Past	Present
End Units	2.3	2.6	2.5	2.7	3.3	3.1	2.6	2.8
Intermediate	2.6	2.7	2.5	2.6	3.2	2.9	2.8	2.7
All Units	2.5	2.7	2.5	2.7	3.2	2.9	2.7	2.7

Source: Field Work, February 1993

The overall occupancy rate has increased slightly since the time the households moved into the houses for all units and end units but has a slight decrease for intermediate units. Individual estates, however, show a different trend. Istana Dua's occupancy rate has decreased consistently for all three i.e., overall, intermediate and end units with the greatest decrease shown by intermediate units (from 3.2 persons per room to only 2.9). The other two units show the opposite; both show significant increases for all three. The trend is caused by the younger families in the latter two estates which are reflected in the still growing household sizes. The older age groups in the former means that some of the children have moved out either in search of work, to pursue further studies or to set up their own families elsewhere.

5.2.12 Space per Person[7]

The previous sub-section shows the higher occupancy (persons per room) in Istana Dua because of its bigger household size. The situation in this estate looks more critical when seen from the provision of space per individual because the bigger household size is compounded by the smaller floor area (28 percent less than those in Batu Kawa and Siol Kanan).

Table 5.18 - Space per Person

	Siol Kanan		Batu Kawa		Istana Dua		All Areas	
(sq. m.)	Past	Present	Past	Present	Past	Present	Past	Present
End Units	15.7	14.0	14.5	13.3	11.1	11.6	13.9	13.1
Intermediate	13.8	13.3	14.6	13.9	11.5	12.7	13.1	13.3
All Units	14.5	13.6	14.6	13.7	11.4	12.4	13.3	13.2

Source: Field Work, February 1993

7 Space here refers to living space which excludes space provided for drying (including balconies)

Thus, space per person for the Siol Kanan and Batu Kawa are above the average for the overall sample population while that for Istana Dua is way below. The only consolation is that while the other two have decreased (from 14.5 sq. m. to 13.6 sq. m. per person for Siol Kanan and from 14.6 sq. m. to 13.7 sq. m. per person for Batu Kawa), Istana Dua has increased considerably (from 11.4 sq. m. to 12.4 sq. m. per person), no doubt due to children moving out to be independent.

5.2.13 Savings

Just over 70 percent of the sample population saved in one form or another. Of the three housing estates, Istana Dua had the highest proportion (73 percent) while the proportion in the other two were almost the same and slightly lower than Istana Dua.

Table 5.19 - Savings

(percent)	Siol Kanan	Batu Kawa	Istana Dua	All Areas
Savings	69.2	68.0	73.4	70.1
No Savings	30.8	32.0	26.6	29.9

Source: Field Work, February 1993

Earlier on in this chapter, it was shown that the Bumiputras formed the bulk of the population of the sample. This heavy concentration had a bearing on the types of savings that they had and in this case the majority of them invested in the Bumiputra Provident Fund[8]. Roughly 3 in 5 invested in this scheme with an overwhelming 72 percent in Istana Dua, 58 percent in Siol Kanan and only, but still considerable, 47 percent in Batu Kawa. The next most popular type was Commercial Banks and it could be assumed that the majority if not all those who saved in this mode were Chinese and Indians. Two other types of savings were also mentioned but were very insignificant; only 4 percent of the population saved in either one of the two.

Table 5.20 - Types of Savings

(percent)	Siol Kanan	Batu Kawa	Istana Dua	All Areas
Bumiputra P.F.	58.2	46.9	71.6	58.4
Commercial Banks	4.4	17.2	0.9	8.2
Post Office Savings	6.6	1.6	0.9	2.7
Jewellery	0.0	2.3	0.0	0.9
None	30.8	32.0	26.6	29.8

Source: Field Work, February 1993

8 The Bumiputra Provident Fund, or *Amanah Saham Bumiputra (ASB),* is a scheme formulated to encourage Bumiputras to invest in shares and stocks. Its predecessor, the National Provident Fund or *Amanah Saham Nasional (ASN),* performed so well that the annual bonus and dividends were never less than 12 per cent since its inception. The Scheme is guaranteed by the Government.

5.2.14 Ownership of Other Properties

Table 5.21 - Ownership of Other Properties

(percent)	Siol Kanan	Batu Kawa	Istana Dua	All Areas
Land	3.3	8.1	3.3	5.4
Land & House	1.1	12.6	0.9	4.3
None	95.6	79.3	95.8	90.3

Source: Field Work, February 1993

Just over 10 percent of the population claimed to have properties other than the present house. More than half of these, 6 percent, even had another house (and land) while the rest only had land. The percentage was considerably greater in Batu Kawa where 13 percent claimed to have both land and house, while another 8 percent had land only.

Table 5.22 - Location of Properties

(percent)	Siol Kanan	Batu Kawa	Istana Dua	All Areas
Kuching	1.1	2.2	2.5	2.1
Outside Kuc/1st D	1.1	11.1	1.7	5.5
Outside 1st Div.	2.2	7.4	0.0	3.7
None	95.6	79.3	95.8	94.7

Source: Field Work, February 1993

Table 5.22 shows the location of these properties. Most of them are outside the City but in the First Division (see Chapter Three). As a high percentage is owned by inhabitants of the Batu Kawa Estate, it is presumed that the owners are Bidayuhs who make up a substantial proportion of the inhabitants and who mostly dwell in the First Division of the State.

5.2.15 Occupational Profile

The majority of the heads of households, 98 percent, were in a full-time paid job with the remainder, 2 percent, self-employed. No head of household was unemployed. Of those who were in a full-time paid job, 76 percent were government servants and 22 percent were employed by the private sector. The majority of the government-employees were employed by the Federal Government (50 percent), followed by semi-government agencies (15 percent) and State Government (11 percent).

Istana Dua has the highest proportion (84 percent) of government servants while Batu Kawa had the lowest (67 percent). This can be explained by the ethnic character of the estates where Istana Dua was overwhelmingly Malays, and Malays prefer to serve the government rather than to be in

the more risky private sector. Batu Kawa's share of the Chinese population, who are more inclined to be self-employed or work in the private sector, was more than a fifth of the total population. This may also be the reason for the higher percentage of self-employed in this estate as opposed to the other two.

Table 5.23 - Occupational Profile

(percent)	Siol Kanan	Batu Kawa	Istana Dua	AllAreas
Self-employed	1.1	3.9	1.2	2.2
Private Sector	20.5	28.4	15.3	21.8
Semi-Government	23.9	10.8	10.6	14.9
State Government	9.1	11.8	11.8	10.9
Federal Government	45.5	45.1	61.2	50.2

Source: Field Work, February 1993

5.2.16 House Price and Amount of Loan

Table 5.24 - Costs of Houses (Mean and Median)

(MR)	Siol Kanan	Batu Kawa	Istana Dua	All Areas
Mean	34,100	33,800	36,500	34,800
Median	32,000	32,000	35,600	35,600

Source: Field Work, February 1993

The average price of the houses was MR34,800, slightly more than the MR32,000 defined by the government. Two factors may have contributed to this higher average. One, the number of end-unit houses which cost more than this ceiling as buyers have to also pay for the extra land that came with these houses. Two, the higher costs of the houses in Istana Dua which were constructed in 1982 long before this ceiling came into effect. This second point is reflected in the following table where the average for Istana Dua was MR36,500 with the Median MR35,600. The Median for the other two areas, Siol Kanan and Batu Kawa were MR32,000, indicating the actual costs of the houses, while the mean was inflated to MR34,100 and MR33,800 respectively, due to the higher costs of the end houses.

Table 5.25 - Amount of Loan (Mean and Median)

(MR)	Siol Kanan	Batu Kawa	Istana Dua	All Areas
Mean	32,600	32,300	35,000	33,300
Median	30,500	30,500	34,100	34,100

Source: Field Work, February 1993

As shown earlier, the majority of the buyers have taken their loans from the Housing Commission although it gives out only a 95 percent loan as is reflected by the median in the shown in Table 5.25, and a slightly higher rate of interest at 5.5 percent. As most of the buyers

were government servants, most would be entitled to get a 100 percent government loan at 4 percent (Federal loan) and 5 percent (State loan). Even so, this is still more attractive than a bank loan (75 percent loan at 11.5 percent interest rate) and, moreover, these buyers could still make use of their housing loan eligibility from the government even though they have taken these loans from the Commission.

The majority of these buyers (73 percent) claimed to have paid deposits for the houses from their own savings. Around 18.1 percent withdrew their savings with the Employees Provident Fund while a small 2 percent borrowed from close family members.

Table 5.26 -Source of Deposit

(percent)	Siol Kanan	Batu Kawa	Istana Dua	All Areas
EPF	14.1	29.6	10.0	18.1
Savings	77.2	62.2	79.2	72.9
Family	2.2	1.5	0.8	1.5
Not Applicable	6.5	6.7	10.0	7.6

Source: Field Work, February 1993

5.3 ORIGINAL INCOME DISTRIBUTION

The pilot study indicated that the quality of information gathered on income and expenditure patterns was not particularly good. Both figures, when compared to total household income as recorded in the computer data base, were greatly inflated. The comparison was done by adding the estimated total increments for each respondent since the date in the computer data base to the total income as declared therein, and comparing the result with the gross earning and gross expenditure as declared in the survey forms. It was, however, discovered that, when only income from paid employment was used the result was closer to the estimated total income.

Thus the total household income used here includes only income from paid employment (including spouses' income) and any related allowances or overtime payments. Income from other sources like income from second jobs or rents are not accounted for as they are found to be unreliable. Furthermore the number of respondents who did declare income from other sources are very low, 4 percent, 8 percent and 10 percent respectively for Siol Kanan, Batu Kawa and Istana Dua.

Table 5.27 shows the distribution of income among the respondents. These are expressed in monthly amounts. The mean and median incomes for the whole household, the head of household and the spouses are shown in the subsequent table.

Table 5.27 - Gross Monthly Household Income

(percent)	Siol Kanan	Batu Kawa	Istana Dua	All Areas
Not available	1.1	2.9	3.4	2.1
Under MR500	3.4	2.9	2.6	2.8
MR500-799	30.7	26.4	22.3	26.4
MR800-999	30.7	27.4	18.8	26.4
Over MR1000	34.0	40.3	53.1	42.1
Mean (Current)	919.8	1002.9	1094.5	1012.3
Median (Current)	850.0	900.0	1000.0	900.0
Mean (Original)	804.1	833.4	788.0	809.3
Median (Original)	795.0	805.0	750.0	780.0

Source: Field Work, February 1993

The mean monthly household income was MR1010 and the median monthly income MR900. Again, Istana Dua, had the highest monthly income (mean and median income of MR1100 and MR1000 respectively) while Siol Kanan had the lowest (MR920 and MR850). The income levels vary greatly even from that of 1989 mean for the City of Kuching which was MR2040. Even the average for the whole district of Kuching for the same period was MR1650. This reflects the lower-medium income characteristics of the households.

The distribution for each housing area was as expected. The number of households earning more than MR800 per month were 65, 68 and 72 percents for Siol Kanan, Batu Kawa and Istana Dua respectively as compared to 67 percent for the whole three areas.

Table 5.28 - Mean and Median Household Income (Current)

(percent)		Siol Kanan	Batu Kawa	Istana Dua	All Areas
Total H/h	Mean	920	1000	110	1010
	Median	850	900	1000	900
Head of H/h	Mean	840	840	870	850
	Median	800	800	800	800
Spouse	Mean	500	580	590	570
	Median	420	580	420	450

Source: Field Work, February 1993

Thus, more than two-thirds of the respondents do not belong to the low income groups, having total household income of MR800 month, above the MR750 cut-off point. This supports our second sub-hypothesis that '*the low cost houses have benefited a great proportion of households*

from outside the target group'. Even assuming that their gross monthly income did indeed fall below this cut-off point, it would take years for their income to exceed MR1000 monthly unless there was a shift to a better paid job, or there were now joint incomes as compared to a single pay packet previously. The former is unlikely as people who entered government service normally stay till they retire and those who leave are not usually taken back in whatever post. The latter, on the other hand, is also not likely as the number of working spouses actually dropped from 26 percent to 21 percent from the time they moved house to the present. Thus, at least three in every five households were not eligible when they were allocated.

Table 5.29 - Income per Capita

(MR)	Siol Kanan	Batu Kawa	Istana Dua	AllAreas
Original	160	170	120	150
Current	170	190	190	190

Source: Field Work, February 1993

Income per capita for the sample population was MR190. Of the three areas, Batu Kawa and Istana Dua have per capita income of MR190 while Siol Kanan has MR170.

Table 5.30 - Income Profiles of Mortgage Borrowers (Original)

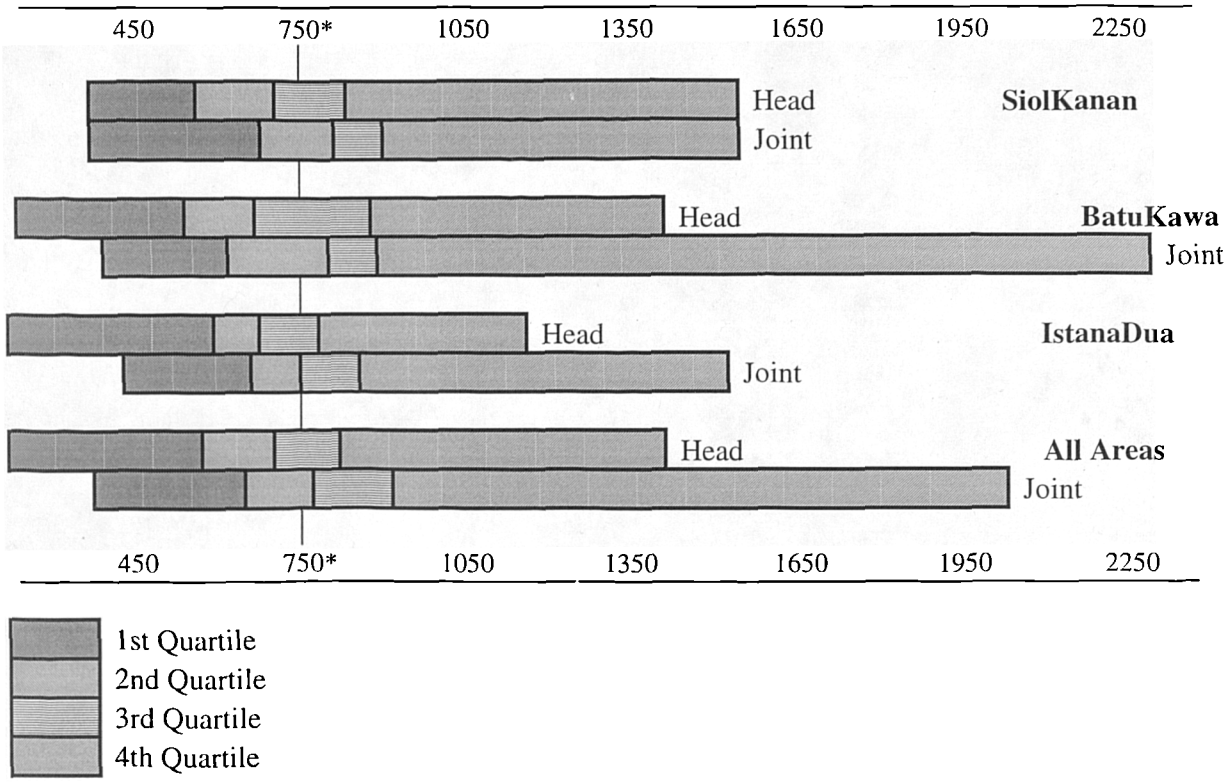
		Min	Q1	Med	Q3	Max	Mean
Siol Kanan	Head	320	540	700	840	1650	690
	Joint	320	670	800	910	1650	800
Batu Kawa	Head	180	520	660	900	1500	720
	Joint	350	600	810	970	2220	830
Istana Dua	Head	150	580	670	780	1200	670
	Joint	390	640	750	880	1620	790
Overall	Head	150	540	690	820	820	700
	Joint	320	630	780	930	930	810

Source: Field work, February 1993.

Table 5.30 above shows the original income characteristics of the household owners, the first for heads income only and the second for joint incomes of households. It shows the high number of fairly well off households that have succeeded in purchasing low cost houses and a significantly low proportion of very low income earners. For heads income, all three areas have a mean and median incomes lower than the MR750 cut-off eligibility point suggesting an efficient implementation process. However, when joint incomes are considered exactly half of the households in Istana Dua were drawing incomes above the eligibility limit while in Siol Kanan and Batu Kawa, around half the total households were earning over MR800 a month. The mean joint incomes for the three areas were MR800 (Siol Kanan), MR830 (Batu Kawa) and MR790 (Istana Dua) respectively reflecting wealthier beneficiaries than those the houses are meant for,

further confirming our second sub-hypothesis. This heavy concentration of non-target households is clearly illustrated in Figure 5.1, especially on joint incomes where at least half of the households are within this economic group.

Figure 5.1 - Income Distribution of Borrowers, based on Head's and Joint Incomes (MR)



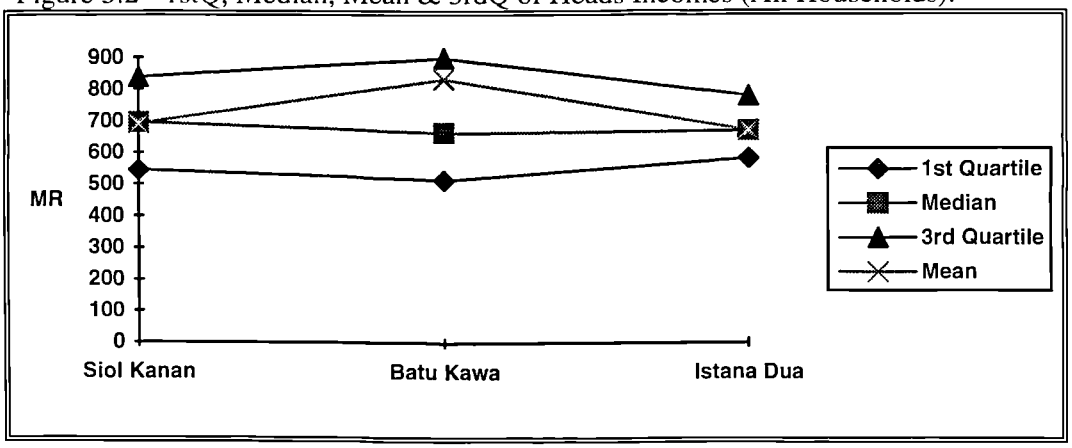
1st Quartile
2nd Quartile
3rd Quartile
4th Quartile

Source: Field Work, February 1993

Since the SHDC adopts joint incomes of households as a basis to allocate houses to applicants, low income households with single income earners, not uncommon in Sarawakian society, are inadvertently being marginalised. On this joint income basis, at least half of the households do not belong to the targeted income group. The higher proportion of ineligible owners in the two estates of Siol Kanan and Batu Kawa reflects either the improved economic conditions of the SHDC's housing applicants or a more biased selection procedure. In order to show this situation, 1st quartile, mean, median and 3rd quartile scores are shown graphically in Figure 5.2 and Figure 5.3. Even if allocation was based on the income of the heads of households only, there was still a significant proportion of ineligible households in the study areas. Although the mean income for the household heads' were way below the MR750 cut-off point, more than a quarter of them - in all the three areas - failed to meet the eligibility criterion. From Figure 5.2, it is shown that the top quartile earns more than the maximum limit of MR750.

The range of observed incomes is not very wide for heads income, ranging from 8:1 for Istana Dua to 5.2:1 for Siol Kanan. For the overall sample population the range between extremes is 10:1. Although the range is not very wide almost half the sample population falls out of the defined target group, i.e., those earning less than MR750 a month. The scenario based on joint incomes shows a different trend in the income ranges but the proportion of ineligible householders has increased dramatically. While Batu Kawa's income range has increased from 5.2:1 to 6.6:1, Istana Dua's has halved from 10:1 to almost 4:1. Siol Kanan has had no change at all while that of the overall sample decreased considerably from 10: to 6.7:1. These observations indicate that joint income generates a more equitable household income distribution than one based on single income only.

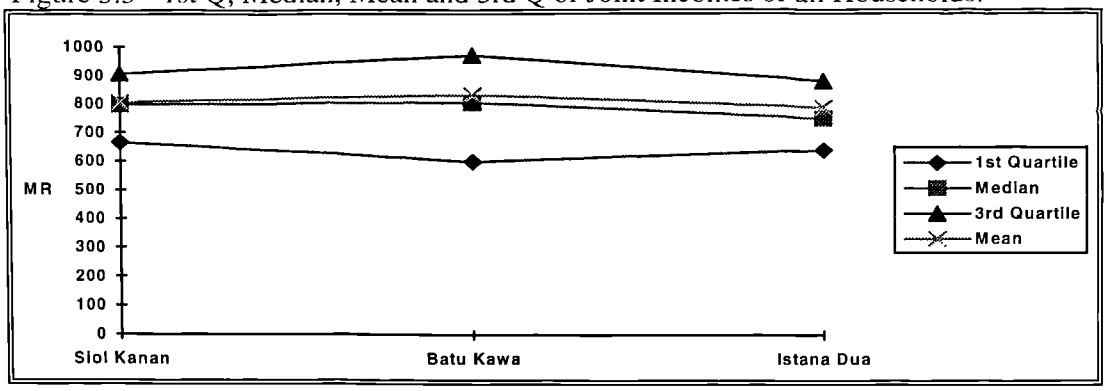
Figure 5.2 - 1stQ, Median, Mean & 3rdQ of Heads Incomes (All Households).



Source: Fieldwork, February 1993.

What is quite interesting here is the income in the inter quartile range where half of the households are earning between MR500 and MR700. This means that the bottom quartile has an income range of between MR150 and MR500. This indicates the top heavy nature of housing distribution to the beneficiaries where a quarter of the houses go to those who are not eligible, half goes to those whose earnings fall within the top third of the targeted income group with the remainder distributed amongst the rest. The same situation can be observed in terms of joint income, as illustrated in Figure 5.3, where more than half of the households do not belong to the target groups. Those in the second quartile are bringing home an income of between MR650 and MR750, the highest scale in the low income range. The lowest quartile, on the other hand, has an income of between MR320 and MR650. What these figures are telling us is that low income households in the lower half of the income range of the target group, i.e., those earning less than MR350, are totally marginalised by the system.

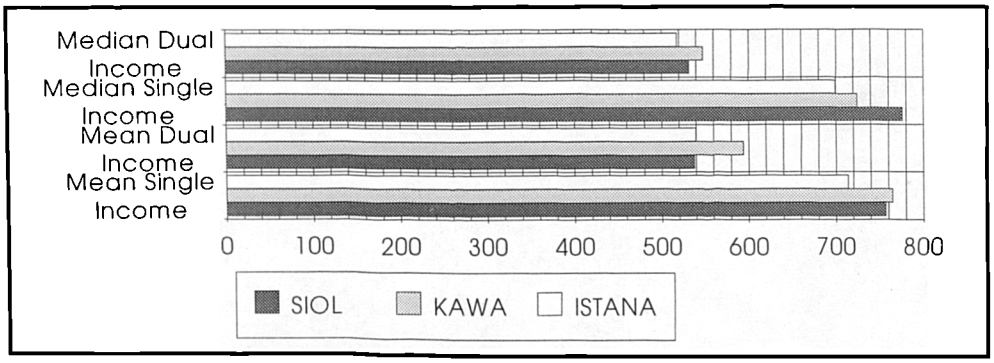
Figure 5.3 - 1st Q, Median, Mean and 3rd Q of Joint Incomes of all Households.



Source: Fieldwork, February 1993.

The effect of this biased allocation policy could be illustrated further by distinguishing between the single income households and dual income households and examining each group's income characteristics. The data back up the suspicion that the income of the heads of dual income households are lower than those of single income households, giving credence to the notion that the spouses are working due to economic necessity. Thus, some of these dual income households might not have succeeded were it not for the extra income brought in by their spouses, as it is fair to believe that, without this supplementary income, these households' chances of getting the houses would have been very much reduced if not negligible. As shown in the following Figure 5.4, the mean and median incomes of heads of dual income households are just over MR500; and it was shown in Table 5.27 that less than 3 percent of the beneficiaries have gross household incomes below this level. On the whole, the earnings of the heads' of dual income households were around 25 percent lower than those of their counterparts. This proves our second and third sub-hypotheses that *'the low cost houses have benefited a great proportion of households from outside the target group'* and that *'beneficiaries who do fall within the target group are mainly those in the upper percentiles'*.

Figure 5.4 - Median and Mean Incomes of Heads of Single and Dual Income Households.



Source: Fieldwork, February, 1993.

5.4 SATISFACTION AMONGST ALL BENEFICIARIES

In order to address the second hypothesis, respondents were asked three questions to sum up their views of their houses and these are, (1) are they satisfied with the monthly instalments? (2) are they satisfied with the amount they are paying for the house? and (3) are they satisfied with the houses; and if not, why not?

Table 5.31 - Satisfaction with Instalments

(percent)	Siol Kanan	Batu Kawa	Istana Dua	AllAreas
Satisfied	91.3	85.2	56.7	78.3
Not satisfied	2.2	8.1	33.3	14.1
Not applicable	6.5	6.7	10.0	7.6

Source: Field Work, February 1993

These questions are then followed by a modified contingent valuation approach where respondents were not asked their willingness to pay for some goods that they have not yet had, but similar goods that they already have but at different location.

Table 5.32 - Satisfaction with House Price

(percent)	Siol Kanan	Batu Kawa	Istana Dua	All Areas
Satisfied	89.1	87.4	50.8	77.3
Not satisfied	4.3	5.9	39.2	15.2
Not applicable	6.5	6.7	10.0	7.6

Source: Field Work, February 1993

A great majority of the respondents are satisfied with the monthly instalments with the highest recorded in Siol Kanan (91 percent) with Istana Dua recording the lowest (57 percent). 85 percent of the respondents in Batu Kawa said that they are satisfied with the amount. A similar picture is recorded in the satisfaction of respondents toward house price, although slightly lower with a corresponding increase among those who express dissatisfaction.

Table 5.33 - Satisfaction with House

(percent)	Siol Kanan	Batu Kawa	Istana Dua	All Areas
Satisfied	82.6	77.8	45.0	68.6
Not satisfied	10.9	15.6	45.0	23.8
Not applicable	6.5	6.7	10.0	7.6

Source: Field Work, February 1993

A similar trend was again recorded for house satisfaction with Siol Kanan recording the highest and Istana Dua the lowest. The figures were however much lower with 82.6 percent, 77.8 percent and 45.0 percent for Siol Kanan, Batu Kawa and Istana Dua respectively. The overall

response shows that firstly, Siol Kanan has the highest proportion of satisfied beneficiaries, followed by Batu Kawa and Istana Dua respectively; and secondly, owners are satisfied with rental levels, house prices and house quality in that order.

Table 5.34 - Areas not Satisfied with

(percent)	Siol Kanan	Batu Kawa	Istana Dua	All Areas
Sitting/Dining	0.0	2.9	18.2	7.2
Bedroom	3.3	0.7	13.2	5.8
Bath/toilet	2.2	1.4	5.8	3.2
Kitchen	0.0	0.7	0.0	0.3
Outside	5.4	7.4	0.8	4.6
None	89.1	86.7	60.8	81.3

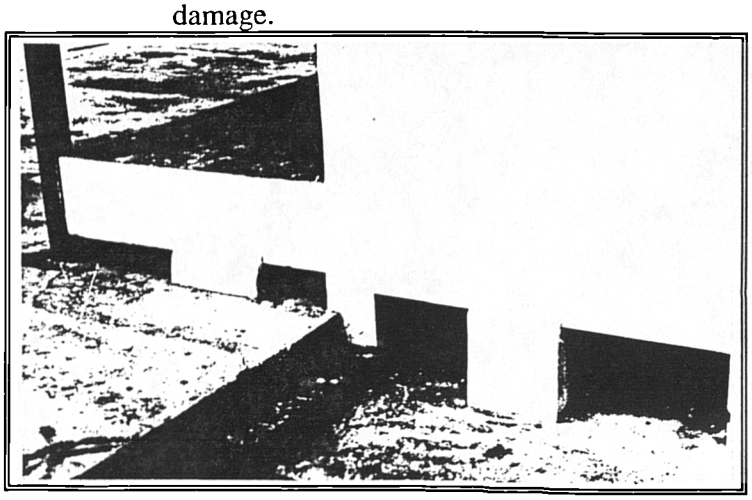
Source: Field Work, February 1993

When asked about specific areas of dissatisfaction, 81 percent could not identify any, compared to 69 percent who actually said they were satisfied with the house. The same trend was detected in all the three areas of Siol Kanan, Batu Kawa and Istana Dua respectively where 89, 87 and 61 percent could not name any specific areas of the house with which they were unhappy, as compared to only 83, 78 and 45 percent who actually said they were satisfied with their houses.

Of those who did identify areas of dissatisfaction, most complained about the sitting room (7 percent) and the bedrooms (6 percent). Quite a number (5 percent) identified areas outside the houses as their main source of complaints. The highest number of complaints as regard to the house proper are in the Istana Dua area where dissatisfaction with the two areas of the house identified were 18 and 13 percent respectively. None in these estates are had any complaint about areas outside the house.

Figure 5.5 - A 'Sleeping Policeman' formed by a Culvert due to the subsidence of the adjoining road surface.

Figure 5.6 - 'Underpinning' of the foundations of houses affected by the subsidence to prevent further damage.



On the other hand, 7 percent in Batu Kawa and 5 percent in Siol Kanan were not happy with the external features including the driveway, the skirting of the houses and the general environment. As far as the houses themselves are concerned, the highest dissatisfaction rate, in Siol Kanan (bedrooms) and Batu Kawa (sitting rooms), was only 3 percent. In Batu Kawa, the high dissatisfaction level with the outside environment can be accounted for by subsidence problem faced by the area which affected the skirtings and the porches of these houses. While this problem is absent in Siol Kanan, the dissatisfaction expressed may be due to the exposed character of the site with no vegetation whatsoever[9].

While the characteristically positive responses given by the respondents are expected, the extremely high rate of satisfaction given in response to all three factors questioned (house, house price and monthly instalments) may well be influenced by, although there is no proof to back this suspicion, the 'uncritical culture' if the Malaysian society.

5.5 SATISFACTION AMONGST THE TARGET GROUP

A high percentage of respondents in Batu Kawa and Siol Kanan, who fall within the target group express satisfaction with their houses, the house prices and the monthly instalments. Between the two housing estates, Siol Kanan has a marginally higher percentage of satisfied house owners within the target group, than in Batu Kawa. Istana Dua, on the other hand, has a fairly low

9 Housing development, or any development for that matter, in Malaysia give little regard for natural landscape features. The erroneous view seems to be that it is not only faster but cheaper to develop by simply bulldozing the area flat and cleansed of its natural vegetation.

percentage of those expressing satisfaction with any one of the three. This low satisfaction level in Istana Dua as opposed to those in Batu Kawa and Siol Kanan can be attributed to certain salient factors[10]. These are the size of the houses, the type of building materials used, the design of the houses and finally, and most critically of all, the price of the houses in relations to the previous factors.

a) Size of the Houses: Houses in Istana Dua are far smaller than those in Batu Kawa and Siol Kanan. In Istana Dua, the houses have a floor area of 44.6 sq. m. while those in Batu Kawa and Siol Kanan are 59.6 sq. m. in size, 33 percent larger than those in Istana Dua.

Figure 5.7 - Satisfaction among the target group (percent)

Source: Field Work, February 1993.

b) Building materials:[11] Besides having a smaller floor area, houses in Istana Dua are built of inferior materials compared to the houses in the other two estates. In Istana Dua, the houses are constructed of hollow block wall without plaster (including party wall) and asbestos roofing, while in the other two the main building materials consist of hollow block wall, clay bricks (for party wall) and metal sheet roofing.

c) House design: Houses in Batu Kawa and Siol Kanan again scored better than those in Istana Dua in this respect. Probably because they are older, houses in Istana Dua are simple, single-storey squarish units built on the ground and in rows of terrace blocks. Those in the other two estates are more imaginative, offering flexible opportunities for future expansion, both vertical and horizontal. The houses are built on stilts , except for the kitchen, and constructed in a split-level form with clear demarcation of use areas.

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10 Houses in Batu Kawa and Siol Kanan are duplicates of each other - same size, same design, similar layouts, specifications and use of materials.

11 Main building materials only.

Even in this respect alone, the houses are much better value especially when those in Istana Dua were sold at a much higher price at an earlier date.

d) House price: In spite of the above factors, i.e. the smaller size, inferior building materials, rigid design and not least their older age and poor workmanship, houses in Istana Dua are sold at a much higher price. These houses, completed in 1982, were sold at MR40,000 compared to those in Batu Kawa and Siol Kanan, completed in 1990, which were sold at only MR32,000.[12]

All in all, the low percentages of satisfied owners in Istana Dua compared to the other two areas can thus be explained by the higher prices and the poorer quality of the houses. The only positive factor is probably its geographical location which is nearer to the city centre and in close proximity to existing settlements and facilities. On the other hand, the differences in the response of those in Batu Kawa and Siol Kanan have more to do with the general environment than the houses *per se*. As stated earlier, although the percentage of satisfied owners is high in Batu Kawa, it is still slightly lower than in Siol Kanan. Bearing in mind that the houses are identical and both sites are geographically equidistant from the city centre, the poorer response in Batu Kawa is due to its site problems.

Phase One of this area suffered a severe subsidence problem which resulted in structural damage to a number of houses. Although this problem was, to a large extent, tackled in the phase under study, and no structural defects have been detected in any of the houses, the roads and drains are still badly damaged, and even the driveways and skirtings of some of the houses have been found to have cracked due to ground subsidence. Within this context, owners are inclined to feel trapped in houses whose values may not hold or indeed holding on to properties with negative equity, even assuming that such problems are not repeated in the future. Thus, it is not surprising to find that, everything being equal, the area has a lower satisfaction rate than Siol Kanan.

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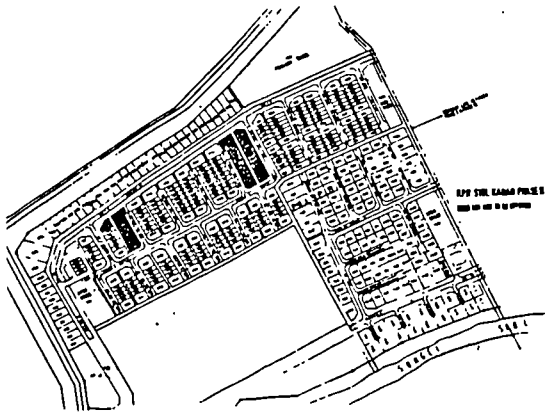
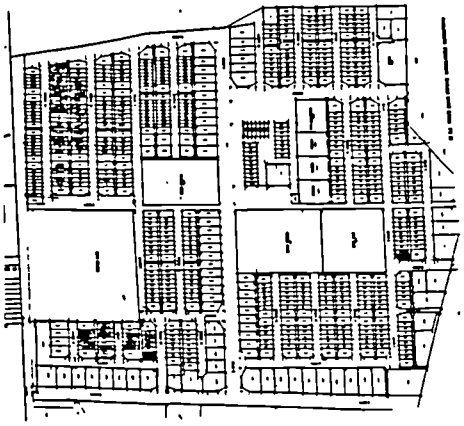
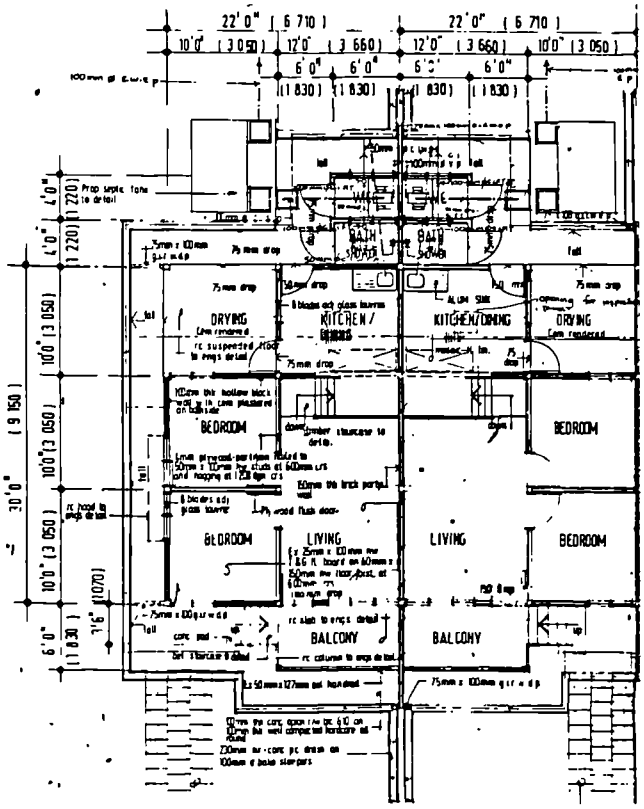
12 In Sarawak, the Central Government directives that low cost houses must not cost more than MR25,000 is not complied with. It is generally accepted in the state that for a developer to qualify for the benefits of a low cost housing construction (higher density and so on) these houses must not be sold at more than MR50,000 which effectively means that low cost houses in the state cost twice as much as those in Peninsular Malaysia. For this reason, houses in Istana Dua still fall within the low cost category. Houses in Batu Kawa and Siol Kanan, meanwhile, were built much later after low cost houses were accepted to cost MR32,000 and less, the higher cost compared to the MR25,000 in Peninsular Malaysia is justified by developers by the higher cost of living in the state.



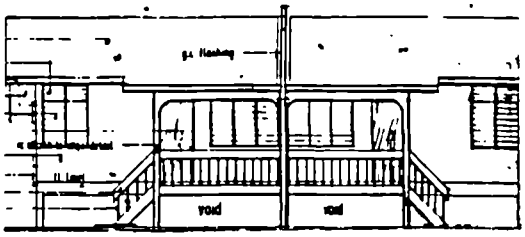
a Layout Plan for Siol Kanan



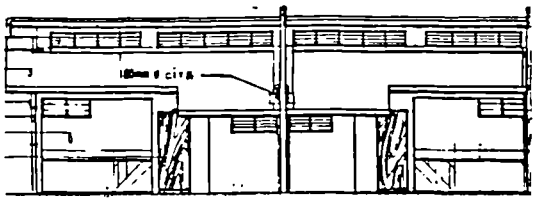
b Layout Plan for Batu Kawa



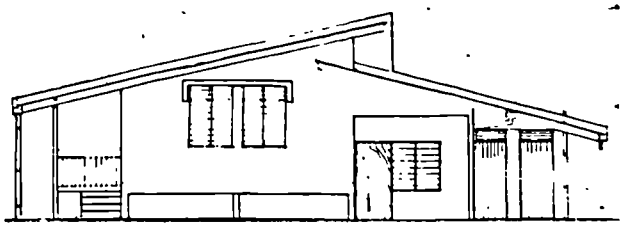
c Floor Plan



d Front Elevation

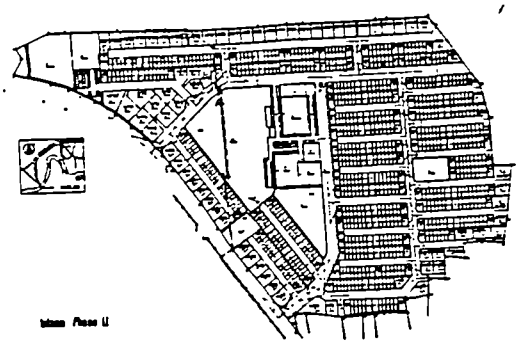


e Rear Elevation

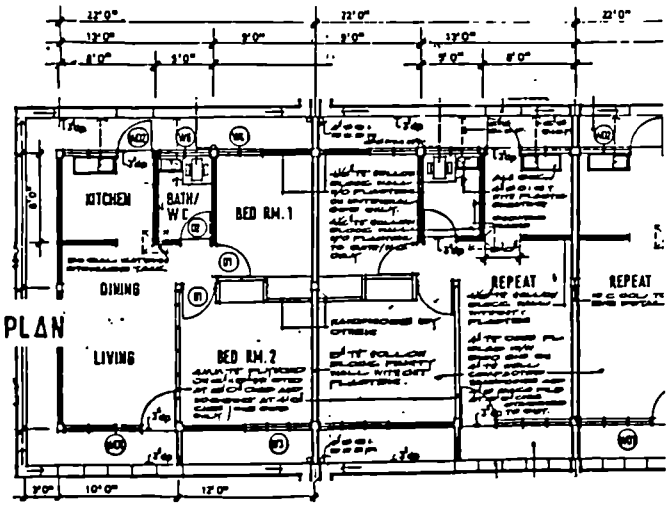


f Left Elevation

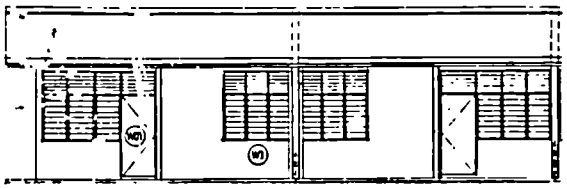
Figure 5.8 - Layout Plans, Elevations and Floor Plans (Siol Kanan and Batu Kawa)



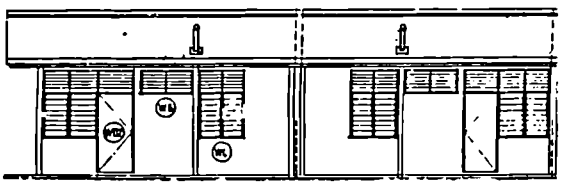
a Layout Plan for Istana Dua



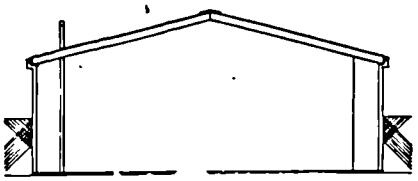
b Floor Plan



c Front Elevation



d Rear Elevation



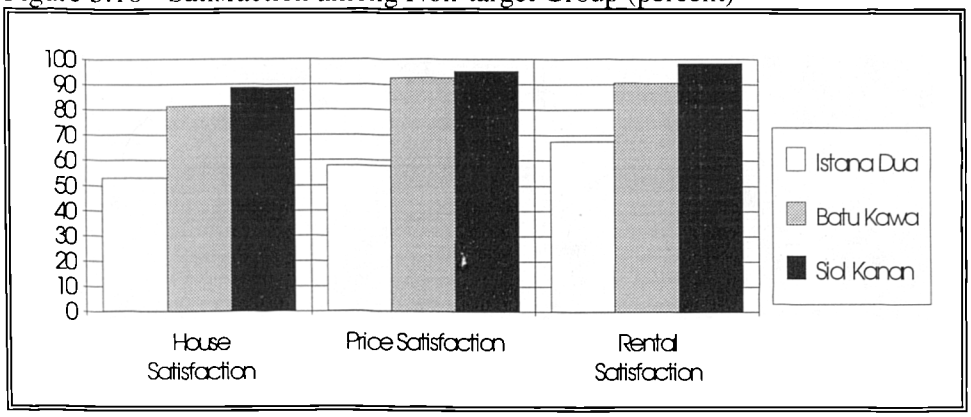
e Right Elevation

Figure 5.9 - Layout Plans, Elevations and Floor Plans (Istana Dua)

5.6 SATISFACTION AMONGST THE NON-TARGET GROUP

A similar pattern of response is displayed by respondents within this group where a higher percentage of owners in Batu Kawa and Siol Kanan express their satisfaction compared to those in Istana Dua. Again, similar reasons as discussed in the previous section for the target group are applicable here. But, the response of those in Batu Kawa and Siol Kanan are almost identical within this group, compared to the slightly higher percentage for Siol Kanan in the previous group.

Figure 5.10 - Satisfaction among Non-target Group (percent)



Source: Field Work, February 1993.

The only possible explanations for this are either their houses are in the least affected part of the site, or, being of higher income, their expectations of low cost houses were much lower than the other group and that such problems were to be expected. Moreover, the subsidence problem in the area was already well known long before the residents were offered these houses.

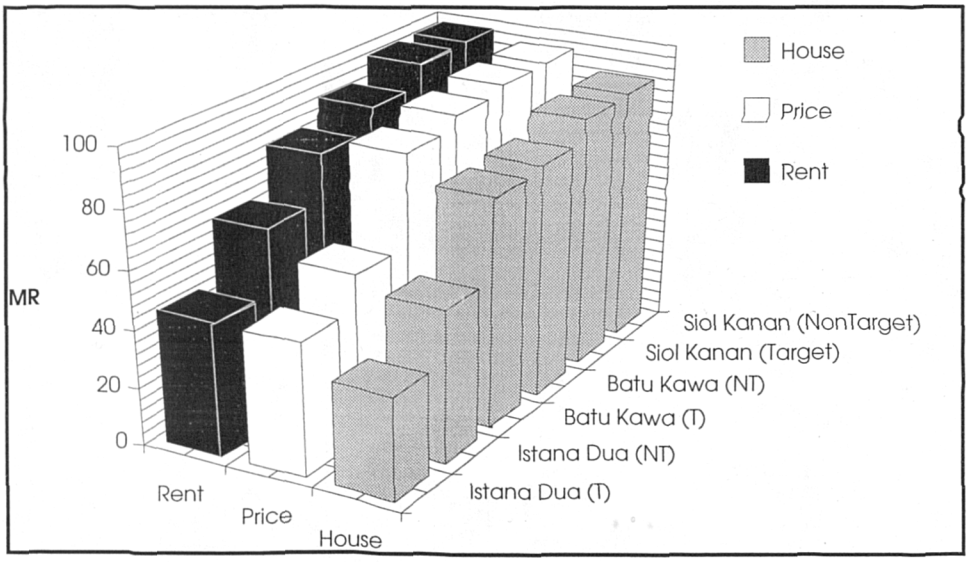
5.7 SATISFACTION AMONGST TARGET AND NON-TARGET GROUPS COMPARED

Respondents in Siol Kanan display either little or no difference in the satisfaction expressed by those in either groups. Judging from their response, both groups seem to be very satisfied with all the aspects asked, particularly with the price of the houses and the monthly instalments that they have to pay. Among the target group, the percentages are 95 and 98 percent respectively while among the other group the figures are 83 and 85 percent. Concerning satisfaction with the houses, 88 percent of those in the target group and 77 percent in the non-target group expressed their satisfaction. This situation in Siol Kanan is almost mirrored in Batu Kawa although the overall levels of satisfaction are slightly lower but nevertheless high. Here, the percentages of satisfied owners are at least three quarters for both the target and non-target groups. Between

the two, there are more contented owners among the non-target population than the target group but the margins are slightly wider than those in Siol Kanan.

The situation in Istana Dua shows a greater difference in the proportion of satisfied owners between these two groups, with those in the non-target group showing more positive response to all three parameters. Although differences between groups are evident, level of response to the three are almost equally divided. Despite the different responses given to each particular aspect by the owners in the three areas, and within and outside the target group, it can be said that the general response are almost similar. In Istana Dua there can be found an almost equal number from both groups who are either satisfied or not with one aspect or another. And likewise, in the other two estates, an overwhelming majority are pleased with what they have been offered, and the fact that one may be more contented than the other hardly matters at all.

Figure 5.11 - Satisfaction between target and non-target groups (percent)



Source: Field Work, February 1993.

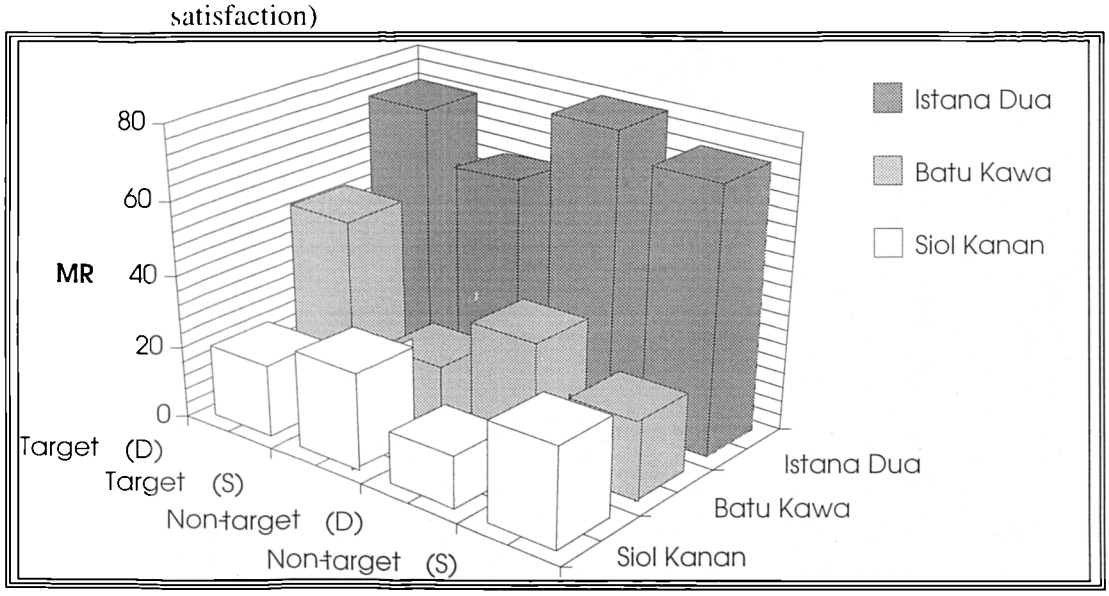
These general responses are graphically shown in Figure 5.11 above. All in all, it proves all the final three sub-hypotheses which are (iv) most beneficiaries are satisfied with the monthly instalments, (v) most beneficiaries are satisfied with the house prices, and (vi) most beneficiaries are satisfied with the houses. These responses thus prove the second hypothesis that measures *habitability* which is *'the high standards adopted for these houses meant that the houses are of high habitable quality'*.

There is little doubt that these satisfaction among the respondents spring from the high quality of these houses, which are quite evident in the different levels shown in the two estates of Siol Kanan and Batu Kawa, as opposed to that of Istana Dua. As previously made clear at the outset of this chapter, the quality of the unit in the latter estate was inferior to that in the other two, but despite this, there is an equal number of satisfied and dissatisfied households in this project area. This point shall be proven further by the following sections where it will be shown that changes carried out to these houses are, in the main, minor, and do not necessarily correspond to those areas indicated by the same respondents as unsatisfactory. Even dissatisfied households are reluctant to move to similar houses elsewhere when asked, and for those who do, they are only willing to pay less than they are currently paying toward the houses.

5.7 CHANGES TO THE HOUSES

Two in every five households (40 percent) have made some kind of changes to the houses. The length of time one lives in a house will obviously have an influence on whether changes, and how many changes, have been made to the house. This is reflected in Istana Dua which had the highest proportion of households (67 percent) who had made changes to their houses while Siol Kanan and Batu Kawa had considerably less and had almost the same number (23 percent and 21 percent respectively). Although lower, the figures for the other two are still high considering the economic background of the owners and the age of houses.

Figure 5.12 - Percentages making changes to their houses (by target group and satisfaction)



Source: Field Work, February 1993.

In Istana Dua, the proportion of satisfied and dissatisfied owners who have made changes in the non-target group slightly exceed those in the target group. In Batu Kawa, more dissatisfied owners - within both target and non-target groups - have made changes than satisfied owners. Siol Kanan, on the other hand, shows a reverse situation. There are more satisfied than dissatisfied owners who have made changes to their houses.

5.8 LOCATION OF CHANGES

Of the changes made, most were done to the bedroom followed by additions outside (mostly awnings or covered parking). In individual project areas, Siol Kanan and Istana Dua show more owners doing changes to their bedrooms than anywhere else. In Batu Kawa, however, most of the changes were carried out outside the house due to the reasons described in Section 5.4 earlier. Nevertheless, changes to the bedroom came a close second. Other areas mentioned were sitting-cum-dining hall, the kitchen and the toilet. While the age may have a hand in the number of houses that have been changed or renovated, there is a likelihood that the pressure to extend and renovate the houses was more acute in the Istana Dua Estate because of the poorer workmanship. Although the pressure to extend or add to the existing building was also great, this might not necessarily occur as there is very little room for further extension.

Table 5.35 - Location of Changes to the House.

(percent)	Siol Kanan	Batu Kawa	Istana Dua	All Areas
Bedroom	17.2	7.0	40.8	23.2
Sitting/Dining Room	1.1	0.7	19.3	7.6
Kitchen	2.2	1.4	0.0	1.2
Toilet	0.0	1.4	0.8	0.9
Outside	2.2	10.5	5.8	7.3
No Changes	77.3	79.0	33.3	59.8

Source: Fieldwork, February 1993

This contrasts sharply with the parts of the house with which respondents were not happy. Although most works were carried out on the bedrooms (23 percent), only 6 percent were actually not satisfied with them. The picture is similar in all three estates, where the percentage of those who carried out changes to their bedrooms were at least three times the percentage who indicated their dissatisfaction with these rooms.

5.9 TYPES OF CHANGES

Overall, changes carried out are overwhelmingly on the improvement of houses. Only a handful of owners have actually carried out extensions and additions to their houses and all are in the Batu Kawa housing estate.

Table 5.36 - Types and Frequency of Changes

(percent)	Siol Kanan	Batu Kawa	Istana Dua	All Areas
Improvement	14.1	8.0	55.8	28.0
Renovation	8.6	10.1	10.9	10.7
Extension	0.0	2.2	0.0	1.2
Addition	0.0	0.7	0.0	0.3
No Changes	77.3	79.0	33.3	59.8

Source: Field Work, February 1993

The types of work carried out were either improvements or renovations[13]. It has already been shown that more changes were carried out by the non-target group. A similar occurrence is found among the type of jobs carried out among both satisfied and dissatisfied house owners. Improvement works are popular among both satisfied and dissatisfied owners in the target group. This is understandable since, as low income earners, the target group can only afford to improve rather than to renovate. While the outlay for such improvements may not amount to much, it may still be a high proportion of their income considering their income levels. Their willingness to do so may be explained by the resigned acceptance that they may not be able to get and move to another and better house.

Among the satisfied non-target group, the majority of changes are in the form of renovation works. The response among their dissatisfied peers is slightly varied; improvement works in Istana Dua, renovation works in Batu Kawa and no changes in Siol Kanan. The willingness of the former to invest in costly renovation works may be a reflection of the degree of satisfaction that they have toward the houses. This may be a group who, although falling outside the target group, were really bent on getting houses and not simply as temporary shelter while hoping to move to better houses in the future. Among the latter, the reasons vary depending on areas. In Istana Dua improvement works were done probably out of necessity (smallness of size, poor workmanship, length of stay, etc.). While they belong to the non-target group, the unwillingness to do more than improve the houses may be due to the prevailing desire to move out or simply

13 Improvement is defined as work done due to poor original workmanship, without any alteration to the room itself, while renovation is alteration carried out in the form of replacing original materials or relocation of certain features of the house without affecting the main parts.

due to physical constraints. The renovation works carried out in Batu Kawa may be necessitated by defects caused by the land problem. As shown earlier, the majority of the works done in this estate relate to areas outside the house and more than likely involving repair to skirtings and porches. Again, considering that the houses have only been occupied in the last three years, only necessity would have made these owners to spend so much especially after all the expenses incurred when moving to houses which they are not happy with. The situation in Siol Kanan may support this view. The houses are of the same design and age as those in Batu Kawa but suffer none of the problems. None of the dissatisfied non-targeted beneficiaries has done anything either to improve or renovated his or her house. There are various reasons for this among which are (a) there is no physical need to do so; (b) they have just moved in, and; (c) they may be planning to move out because of their dissatisfaction.

Table 5.37 - Types of changes by Groups

Economic Group		Istana Dua	Batu Kawa	Siol Kanan
Target	- Satisfied	Improvement	Improvement	Improvement
	- Dissatisfied	Improvement	Improvement	Improvement
Non-target	- Satisfied	Renovation	Renovation	Renovation
	- Dissatisfied	Improvement	Renovation	None

Source: Field Work, February 1993.

5.10 COST OF CHANGES

It has been shown that changes to the houses - types and frequency - depend on the income group, i.e., wealthier households not only carry out most of the changes but also those which involve major works. Thus the amount spent by respondents on making changes to their houses are, like other investments on housing, closely linked to these two as well as the length of stay in these houses.

As the following table shows, between the three areas under study, the owners in Istana Dua, which is the oldest of the three, have spent the most on their houses. All three areas show that the non-target group has spent more than their peers, except of course the dissatisfied owners in Siol Kanan who have carried out no changes at all. What is also evident from the table and which has not been realised is that generally more is actually being spent on doing changes in Siol Kanan than Batu Kawa given the similarities and differences between them. Obviously, the feel good factor brought about by the high level of satisfaction among the owners in general may have a hand in this.

Table 5.38 - Average amount spent on changes carried out in the houses

	Siol Kanan	Batu Kawa	Istana Dua
Overall Target	350	220	1480
Overall Non-Target	560	420	1780
Satisfied Target	440	310	950
Satisfied Non-Target	600	320	1810
Dissatisfied Target	120	80	1460
Dissatisfied Non-Target	0	160	2240

Source: Field Work, February 1993.

5.11 MOVING HOUSE

Although only 69 percent said they were satisfied with their houses, 91 percent of the sample population said they did not in fact want to move at the present time while only 6 percent indicated otherwise. Another 4 percent were not sure. Of those who said they wanted to move out, the highest proportion was in Istana Dua (10 percent) while Siol Kanan had the highest proportion (95 percent) wanting to stay.

Table 5.39 - Desire to Move Out

(percent)	Siol Kanan	Batu Kawa	Istana Dua	All Areas
Affirmative	3.3	6.6	10.0	6.0
Negative	94.5	88.9	87.5	90.5
Indecisive	2.2	4.4	2.5	3.5

Source: Field Work, February 1993

This low response in the number of owners wanting to move to another but similar house somewhere else in Siol Kanan confirms the high incidence of satisfied house owners here. This applies to both respondents within and outside the target group, and among those who expressed both satisfaction and dissatisfaction with their houses. Seen as a whole, the percentages that expressed a desire to move out were almost the same for target and non-target respondents in this housing estate.

In Batu Kawa only 14 percent of those who are dissatisfied in the target group said they would like to move house. This low response may be due to their resigned acceptance, reinforced by their status in the target group, of the impossibility of getting a similarly priced house of the same quality. Among those in the non-target group, the percentages of satisfied and dissatisfied house owners expressing the desire to move are almost the same. However, among the target group, the percentages wanting to move were surprisingly higher among satisfied respondents than dissatisfied ones.

The situation in Istana Dua corresponded to what was anticipated. Although the overall affirmative response in this area was high, the percentages were not much more than those in Batu Kawa where, as shown earlier, the houses are much better in most respects. This is probably due to greater importance being attached to general outdoor environments and the close proximity to existing settlements. It must also be remembered that the majority of the beneficiaries of this project originally came from and thus have relations in the surrounding areas. Overall the number of dissatisfied owners wanting to move are twice those among satisfied respondents.

A number of general conclusions can be derived from here. One, the high percentage of house owners wanting to move in Batu Kawa shows the greater importance put on the quality of outdoor environment than on the physical quality of houses; two, this desire to move among respondents is not linked to whether they fall within or outside the target group. One would suspect that there would be a higher level of satisfied owners among the target group and therefore more willingness to stay but this was found not to be so. The percentages from both groups that expressed the desire to move are almost the same.

5.12 WILLINGNESS TO MOVE OUT

This acceptance of the present houses and probably satisfaction of the present surroundings is confirmed when respondents were asked how much they were willing to pay to move to a similar house in a different location. The majority of the respondents are willing to pay about the same or less than what they are currently paying towards the new house. This applies to both respondents within and outside the target group as well as those wanting or not wanting to move out. The few who are willing to pay more than they are already paying are found among the target group in Istana Dua and Siol Kanan. Those in Istana Dua strangely claimed to be satisfied with the houses but have expressed the desire to move out when asked. Those in Siol Kanan, on the other hand, are the ones who are dissatisfied with their houses. Except for these two groups, all the others are only willing to pay less than they are currently paying if they have to move.

The average amount that respondents who did not want to move would be willing to pay to move to similar houses elsewhere was MR160, a drop of 21 percent from the current amount they are paying. Those who indicated willingness to move gave an average willingness to pay of MR170 a month (a drop of 14 percent). Again, such figures confirm the great satisfaction the beneficiaries get from these houses. Even among those who were not happy but wish to move indicated a lower rate than what they are currently paying.

Table 5.40 shows a detailed breakdown on willingness to pay among respondents by willingness to move, project area, target and non-target group as well as satisfied and non-satisfied respondents. On the whole, all those who did not want to move are only willing to pay a fraction of their current rent if they have to move to a similar house elsewhere showing the high level of satisfaction that they have with the present house. Within this group, those in Siol Kanan seem to be happiest with their houses as shown by the lowest average willingness to pay in all groups. These are followed by those in Istana Dua and Batu Kawa, except those who are dissatisfied in both target and non-target groups. For these households, those in Batu Kawa seem to be more satisfied with their houses than their counterparts in Istana Dua.

A similar picture can be gleaned from among those who were willing to move out. Their average willingness to pay for similar houses elsewhere are on the whole slightly lower than the amount they are currently paying. Judging from the average willingness to pay from among these groups, those in Siol Kanan are more keen to move than those in the other two estates. Those in Batu Kawa, surprisingly, seem to be least keen of all.

Table 5.40 - Amount Respondents are Willing to Pay in order to Move to a Similar House Elsewhere (MR)

		Siol Kanan	Batu Kawa	Istana Dua
No to Move	Overall Target	18	71	41
	Overall Non-Target	20	67	55
	Satisfied Target	20	75	48
	Satisfied Non-Target	15	66	35
	Dissatisfied Target	59	30	62
	Dissatisfied Non-Target	0	49	59
Yes to Move	Overall Target	146	92	123
	Overall Non-Target	142	103	118
	Satisfied Target	143	89	128
	Satisfied Non-Target	145	101	129
	Dissatisfied Target	125	103	117
	Dissatisfied Non-Target	163	113	109

Source: Field Work, 1992

These figures further confirm the high standards of habitability of the houses provided in these areas especially those in Siol Kanan and Batu Kawa. Although some of the respondents expressed their dissatisfaction with the price, rental and quality of these houses less than a tenth expressed readiness to move out. Even those who wanted to move out were only willing to pay much less than they are currently paying for similar houses elsewhere. Such incidents are highlighted by those households who said they were not satisfied with the houses and who had

expressed their desire to move. Even this group, who had the most to gain, compared to those in the other two areas, was only willing to pay less when we would expect them to be otherwise.

5.13 SUMMARY

This chapter has proven the two hypotheses and their associated working sub-hypotheses set out at the beginning. It has been shown that, based on total household income as practised by the SHDC, almost three quarters of the beneficiaries were not entitled to these houses when they were given the offer. Over a quarter belonged to the top third of the target income group with the remainder, less than 5 percent of the total, falling within the middle third of the income group. It was also found that a fair number of houses (15 percent) were allocated due to political interference. The heavy concentration of non-eligible households was due to the biased allocation system which favours those whose earnings fall between just over the target income group and MR1,000 per month. The reason for this is difficult to gauge especially when it is implemented by an arm of the government set up to implement its policy; in this case it is there to undermine rather than to implement. The only reason that could be put forward to explain such counter practices is the desire to ensure that efficient cost recovery could be achieved from these beneficiaries even if it meant choosing the 'wrong' households. This suggestion is supported by the fact that the majority of the beneficiaries (97 percent) are salaried households, the bulk of whom work in the public sector. If this is so, then this finding supports that made by Ludwig and Cheema (1987) and Ramirez and Burgess (1988). This seems to support Klak's (1993) contention that the low income of a household is actually a liability rather than an asset in the process of acquiring subsidised housing. These findings are summarised in the following table.

Table 5.41 - Summary of the Beneficiaries Economic Traits

percent	Siol Kanan	Batu Kawa	Istana Dua	All Areas
Political Applicants	8.9	24.9	8.9	15.2
Age over 45	12.6	23.5	31.1	26.4
Income groups/levels				
Non-Target	64.7	67.7	71.9	68.5
Target				
MR500-800	30.7	26.4	22.3	26.4
less MR500	3.4	2.9	2.6	2.8

Source: Field Work, February 1993.

The high habitable quality of the houses has also been successfully established. A great majority of the respondents responded positively to all three aspects asked, the physical, the price and the

monthly instalments. Even among those who did expressed their dissatisfaction with one or more of these three aspects, only a small number expressed the desire to move out if given the opportunity. Among this tiny minority none was willing to pay more than their current monthly instalments toward the present house. From this, it is gathered that these houses are of high quality and have high market values. Having identified the economic backgrounds of the beneficiaries and the quality of the houses, the next chapter will attempt to establish the actual costs of producing these houses and relate it to the affordability of the beneficiaries. The intention is to see whether the amount recovered and the amount invested diverge, and if they do by how much.

This chapter has also identified certain issues which should be addressed in order to help alleviate the housing problem, particularly in terms of the SHDC's implementation practice. The high rate of savers among the beneficiaries, and the high percentage having alternative sources to cheap government loans should be exploited by the SHDC to relieve itself of the loan burden (and the associated problem of cost recovery) and to mobilise this readily available capital for its own use, thus not having to beg from the Federal and State Governments every time. The policy of allocating these houses to those born in and around Kuching is another point of contention. Granted that the demand for such houses is greater here than anywhere else in the state, there may be a danger that the SHDC may be blinkered by too much concentration in this one area and overlook the opportunity to increase its land bank via readily available but better quality land elsewhere although no demand for housing may be apparent at the moment. It must be remembered that much of the obstacles faced when applying for government funds, as well as failure to spend government allocation, is due to inavailability of land, or land which was still in the process of acquisition. These issues will be further elaborated in the final Chapter Seven, together with findings from the next chapter, where they will hopefully form the basis for the recommendations of this study.

CHAPTER SIX

CHAPTER SIX

SUSTAINABILITY OF THE PROJECTS AND AFFORDABILITY OF THE BENEFICIARIES

6.0 INTRODUCTION

The last chapter has shown that the low cost houses provided by the SHDC have benefited the wrong group of people, the majority of whom do not belong to the target group and fall within a higher income group. The causes identified were interference by political figures which is not helped by a point-allocation system which is biased toward the lower middle income households. It was also shown that the majority of them are very satisfied with these houses indicating their high standard of quality. Having established the economic characteristics of the beneficiaries and their satisfaction with the physical aspects and price levels of these houses, this chapter will now attempt to explore the actual costs of producing these houses. This will enable affordability levels at these production costs to be established and comparison be made with affordability levels at selling price and the actual original affordability levels of the beneficiaries.

The first aim of this chapter is, therefore, to examine the sustainability of these housing projects by looking at the total amount of subsidy, the sales price and production costs, the net deficit between the two, and finally the average rate of cost recovery/arrears per unit of housing. As indicated and explained in Chapter Four, only two housing estates are analysed, i.e., Siol Kanan and Batu Kawa. The second aim of this chapter is to make an in depth analysis of the affordability levels of all beneficiaries - both target and non target groups - by looking at their rent-income ratios (RIs) and their price-income ratios (PIs), in conjunction with the amount of arrears that they have. The World Bank (1993) not only identified these two ratios as the main indicators of affordability, they also suggest that the two ratios can explain the nature and efficiency of a country's housing market. Ratio analysis in housing mortgage finance offers a simple tool that shows the credit-worthiness and affordability of the borrower which is easily comprehended by both the lender and the borrower (Landeau, 1990).

The objectives are firstly to determine whether the majority of the beneficiaries who, theoretically, can well afford these houses; can afford to pay their selling prices. It will also

assess whether a fixed rent-income ratio that is arbitrarily defined is a realistic measure of their affordability, whether arrears are a serious problem and if so what are the causes, and finally whether a flexible rent-income ratio which increases over time is a more practical measure to assist people in servicing their housing loan.

Basically the aims and objectives just described will test the final two hypotheses as described in Chapter Four which are:

a) The immense gap between the actual cost of producing the houses and their sales prices coupled with the poor rate of recovery makes the projects difficult to replicate.

The above hypothesis, which evaluates the *sustainability* of the programmes, will be tested by the following sub-hypotheses:

(i) The actual costs of putting up these houses are more than double their sales prices;

(ii) The average arrears per household is nearly half its average monthly income; and

(iii) The amount of money to be repaid, assuming a full-recovery, is just a fraction of even the total costs of the projects.

b) All beneficiaries of these low cost houses, irrespective of their income group, have affordability problems.

The above hypothesis, which evaluates the *affordability* of the houses, will be tested by the following sub-hypotheses:

(iv) Most households experience a decreasing rent-income ratio over a period of time, but among the poorer households the ratios have actually increased;

(v) High original rent-income ratio, a trademark of the low income households, is one of the major causes of arrears;

(vi) The non-target group suffers from affordability problem and falls into arrears as much as the target group; and

(vii) Income per capita, and not gross household income, is more influential in determining whether a household defaults or not.

6.1 SUSTAINABILITY OF THE HOUSING PROJECTS

The previous chapter brings into question the actual costs of providing low cost houses of such quality. It is an open secret that the conventional or provide based approach in the provision of low cost housing depends heavily on state subsidy and, where the project is of mixed development, on cross-subsidy. The huge amount of money allocated to the housing sector makes it imperative that maximum efficiency and equity is achieved in its utilisation. Financial allocation, however, is not the only cost that is involved in housing production. Housing regulations and taxation, to name just a few, are other types of intervention that contribute to housing cost but are seldom quantified. Thus, the actual cost of house production (and the benefit accruing from it) is rarely known.

For an average intermediate unit in Siol Kanan, for example, the figure provided by the SHDC shows that the actual cost of producing one such unit is exactly MR34,632, more than its selling price of MR32,000. Although this amount excludes non-monetary factors or inputs, the consumer is already being subsidised at more than 10 percent of the construction price of the house. The actual amount is substantially more than this if non-quantifiable or non-monetary factors are costed and included in the calculations. In order to calculate the actual amount of subsidy injected by the state, net present value is used here and applied to two of the three case areas, namely, Batu Kawa and Siol Kanan. This is because being more recent they are better documented and thus allow more accurate assumptions, where they are needed, to be made. Beside this, the similarity in size, design, layout, use of materials, et cetera, will assist in highlighting factors that could add to extra housing costs between differing localities.

The use of net present value enables us to evaluate how housing policies affect housing prices, how much benefit the developers, the end users and the general economy accrue, as well as how much cost each one of them has to pay. It can also be used to compare the costs and benefits of one project approach against another and to determine which one provides greater equity. In the case of this research, net present value is applied not to make comparisons as such but simply to identify in more detail not just the type of subsidy that the successful applicants obtain from the state, but also how much it is. In doing so, where real costs are not available, assumptions are made to quantify the various state interventions in the low cost housing market which in the end could point to approximately how much it costs to produce each unit of low cost house under investigation. Costs and benefits[1] measured will be evaluated from three market players: the

[1] These involve the measurement of financial costs only and do not involve any social costs as found in the conventional Cost-Benefit Analysis.

developers, the consumers and the general market as a whole. Since all units are sales units (the SHDC do not provide rental housing), and the overwhelming majority of respondents are owner-occupiers, only the sales model[2] is used here. Since both housing projects are similar to each other, data used as input are in most cases common to both.

The main objective of applying this technique is therefore to identify how much subsidy goes into each housing unit, who profits most from it and who pays for it. Closely tied to this is to identify the affordability level of the buyers based on the actual monetary costs of producing these units. It is also hoped that incidental factors and the extra subsidies injected because of them could also be identified. Ultimately, it will evaluate the overall viability of such low cost housing approach within the context of the overall needs and demand.

The model developed by Malpezzi (1988) is used here and because it was designed to analyse the Malaysian housing market, only small refinements are required, mainly to global parameters, to adjust them to the current situation and the Sarawak context. Input data is based on actual figures provided by the SHDC. Where such figures are not available, especially global parameters like expected rate of increase in land prices, assumptions will be made. In such cases and in common with most goods, such refinements will be made by increasing the figures by 20 percent. A summary of the input data used for the two project areas are shown in Appendix 6.1. It must be highlighted here that, aside from the design, size, materials used and selling price in the two projects, there are significant differences between the two areas which contribute to the production costs of Batu Kawa. These are:

i) part of the land in Batu Kawa was in a mixed zone and thus costs more to purchase and is reflected in the higher market price of the unit;

ii) the subsidence problem faced by this area increased the cost of earthworks.

Two other factors which would have increased the units further but were not possible to be accounted for. These are

i) the original expenses incurred before the original contractor, who implemented a different approach and design to the current one, absconded;

ii) the on-going work to rectify damages on some houses due to the subsidence problem.

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2 This model is based on one of three that was developed by Malpezzi (1988), the other two being renters model for rental housing units and lease with option to buy model .

It is fair to assume that the cost of rescuing the abandoned project as well as the reparation to the damaged houses are fairly substantial and should rightly be considered as part of the overall cost of the project, but for reasons described above are excluded in this analysis.

Table 6.1 - Costs of Various Incentives and Disincentives

		Siol Kanan	Batu Kawa
1	Net Land Subsidy	10,187	32,815
	Capital Infrastructure Subsidy	2,614	2,966
	Recurrent Infrastructure Subsidy	1,175	1,175
2	Net Infrastructure Subsidy	3,789	4,141
	Land Use & Infrastructure Regulation	(7,200)	(7,200)
	Building Standards	(1,200)	(1,200)
	Planning Permission	(1,200)	(1,200)
3	Net Regulation Costs	(9,600)	(9,600)
	Materials Subsidy	6,224	6,224
	Construction Finance Subsidy	1,200	1,200
	Labour & Other Construction Subsidy	3,000	3,000
4	Net Construction Subsidy	10,424	10,424
5	Net Finance Subsidy	14,091	14,091
6	Extra Transaction Costs	(113)	(113)
7	Net Taxes	2,178	2,178
	NET INCENTIVES & DISINCENTIVES	30,956	53,936

Source: SHDC, February 1993

Table 6.1 shows the amount of subsidy involved in the production of a standard intermediate unit in these two areas. An intermediate low-cost house in Siol Kanan consumed a net subsidy of MR31,000 to produce while in Batu Kawa the amount was MR54,000, the bulk of which was caused by the extra costs of land purchase (alienated land) and earthworks (subsidence problems). This subsidy, however, does not all go the purchaser as will be shown latter. The table suggests that in normal circumstances finance, land and construction demand the highest amount of subsidy with the materials taking up much of the later. It is noteworthy that a large proportion of the material subsidy went to the supplier which happens to be a subsidiary of the developer, i.e., SHDC. This naturally begs the question, whether such subsidy was really necessary or whether it was there to provide a life line to this subsidiary company.

The following table 6.2 shows a detail breakdown of who bore the costs (disincentives) and who enjoyed the benefits (incentives) as outlined in Table 6.1. Here, the main market participants are identified and the costs and benefits to each one of them accounted for. For both areas under scrutiny, the benefits to the overall economy exceed costs, indicating that it is efficient to build these houses, with Siol Kanan out-performing Batu Kawa. In Siol Kanan, the net benefit is

MR22,700 compared to only MR3,800 for Batu Kawa. Again, the size of the net benefit of the projects depend, on the one hand, on the status and costs of the land and the amount required to prepare the site, and on the other, the marketability of the houses. While the former is significant in pushing up the costs of production, it is the latter which will determine the viability of the projects. This is particularly so with Batu Kawa, whose astronomical costs of production, due to its site problem, was more than compensated for by the high prices these houses command due to the status, and marketability, of the area (the market value). Between the two, the units in Siol Kanan are, however, definitely more efficient to build.

Table 6.2 - Costs and Benefits to Market Participants

		Siol Kanan			Batu Kawa		
		Cost	Benefit	Net	Cost	Benefit	Net
1	**The Economy**						
	Cost to the Economy	(32,292)			(61,221)		
	Benefit to the Economy		55,000			65,000	
	Net Benefit to the Economy			22,708			3,779
2	**The Developer**						
	Economic cost	(32,292)			(61,221)		
	Land Use & Infrastructure	(7,200)			(7,200)		
	Planning Permission	(1,200)			(1,200)		
	Building Regulations	(1,200)			(1,200)		
	Taxes (Acquisition Taxes)	(960)			(960)		
	Land Subsidy		10,187			32,815	
	Infrastructure Subsidy		2,614			2,966	
	Construction Subsidy		10,424			10,424	
	Selling Price		32,000			32,000	
	Net Benefit to the Developer			12,374			6,424
3	**The Purchaser**						
	Selling Price	(32,000)			(32,000)		
	Extra Transaction Costs	(113)			(113)		
	Market Value of Housing Services		55,000			65,000	
	Recurrent Infrastructure Subsidy		1,175			1,175	
	Finance Subsidy		14,091			14,091	
	Net Benefit to the Purchaser			38,153			48,153

Surprisingly, the developer seems to be a net benefactor of the programme contrary to the general belief that much of the costs is shouldered by it. Although it bore the costs brought about by government interventions (the stringent planning, infrastructure and building regulations), the subsidies it gets for each one of these interventions as well as the high subsidy for land and construction materials in the end made it a net benefactor of state interventions. Overall, the financial benefit (the sales prices of the unit) to the SHDC exceeds these financial costs. Even for Batu Kawa, where the production cost is astronomical, the benefits it gets from government subsidies helped to push these down giving it a handsome profit of around MR6,500 per unit. In both these examples, the developer was shown to be the main benefactor of state subsidies on

land, development regulations and construction materials. The message seems to be that so long as the state is willing to donate land for housing development at a premium and relax the regulations, whoever takes up the offer will profit.

Table 6.3 - Costs of Producing a Unit of House

	Siol Kanan	Batu Kawa
Economic Costs	32,292	61,221
Land Subsidy	10,187	32,815
Capital Infrastructure Subsidy	2,614	2,966
Materials Subsidy	6,224	6,224
Construction Finance Subsidy	1,200	1,200
Labour & Other Construction Subsidy	3,000	3,000
Finance Subsidy	14,091	14,091
Recurrent Infrastructure Subsidy	1,175	1,175
TOTAL COSTS OF PRODUCTION	70,783	132,692

There is no question that of all the three participants in the market, it is the purchaser that benefits most. From the consumer's side, at a cost of MR32,000, each consumer derives a total benefit that is more than double this investment, MR70,000 for a household in Siol Kanan and MR80,000 in Batu Kawa. This benefit is far greater than this if it is examined from the producer's side (both the State and the SHDC) where, as shown in the above table, the actual costs of producing these houses are far higher than the market value. In Siol Kanan, the cost of producing each unit is almost two and a-half times its selling price while in Batu Kawa it is more than four times, thus proving the first sub-hypothesis, i.e., *the actual costs of putting up these houses are more than double their sales price.* In aggregate, the units in both Siol Kanan and Batu Kawa are efficient to build as the benefit to the economy exceeds costs in both cases. They are even profitable for the SHDC to build even though it has to bear the costs of government interventions. However, it is the purchaser who is the main beneficiary since the benefits that he gets greatly exceed that of his investment, i.e., his financial cost.

The following Table 6.4 indicates the affordability level for these houses at various price levels, namely, at the current selling price, the economic cost of production, the total production cost and market price of the unit. These are again calculated at two different interest rates, i.e., the market rate at 12.0 percent and the government or SHDC rate at 5.0 percent. The total loan at the official market rate is calculated at 90 percent of the total house price which is the maximum that private financial institutions are willing to give. On the other hand, the SHDC give out loans to a maximum of 95 percent of the house price with the remainder to be borne by the buyer himself as his down payment.

Table 6.4 - Affordability of the Houses to the Tenants (MR per month)

		Siol Kanan	Batu Kawa
Official Affordability Level		750	750
House Price at this level	- SHDC Rate	45,000	45,000
	- Market Rate	25,000	25,000
Current Selling Price of Unit		32,000	32,000
Affordability	- SHDC Rate	534	534
	- Market Rate	909	909
Economic Costs of Production		32,292	61,221
Affordability	- SHDC Rate	537	1,020
	- Market Rate	918	1,740
Market Price of Unit		55,000	65,000
Affordability	- SHDC Rate	924	1,083
	- Market Rate	1,563	1,848
Production Costs per Unit		70,783	132,692
Affordability	- SHDC Rate	1,179	2,202
	- Market Rate	2,013	3,774

The top row shows the house price calculated at the affordability level fixed by the government at MR750 and less per month. As the table shows, at this affordability level, houses should not cost more than MR25,000 (at market rate) but because most of the borrowers are expected to be within the same income group, and charged a subsidised financial rate of 5 percent, they should easily be able to afford a house costing up to MR45,000. Thus, as the ceiling price of these low-cost houses are based on finance charged at market rates, most of the borrowers whose loan source is from the SHDC can easily afford these houses as their rent to income ratios are far below the level fixed by the state.[3] However, based on the official selling price, the affordability levels are actually MR910 per month. way above the income levels of the target group. The situation gets more grim when these levels are compared to the affordability levels at economic costs, current market price and at production costs per unit of housing. Clearly, on one hand, the majority of the beneficiaries were households earning more than these official affordability level and affordability level of official selling price of the houses (Table 5.27 and Figure 5.1 in Chapter Five). On the other hand, none of these household could afford these houses if affordability is based on the actual market price, the economic cost or total cost of production and charged at market rate. The highest gross monthly income for the households in these two areas were only MR1,650 and MR2,220.

[3] A loan of MR30,500 (90 percent of MR32,000) charged at 5 percent per annum for 25 years. The monthly mortgage payment is only MR178 a month, or a monthly affordability level of MR534, just over two-third of the level stipulated by the government at MR750 per month.

There is no doubt that, as the above analysis has shown, the benefits to the wider economy are immense. Nevertheless, the more pressing problem for the developer, or the state, is to ensure that similar projects could be repeated elsewhere for other needy households simply by recycling the original budget. Even at the outset, such exercise is impossible owing to the huge amount of money invested in a unit and its low selling price. This problem is made more critical when the whole project is assessed against the SHDC's rate of loan recovery.

Table 6.5 - Monthly Gross Income and Mean Household Arrears (Current)

	Siol Kanan	Batu Kawa	Istana Dua
Mean Current Household Income (Gross)	MR920	MR1005	MR1100
Mean Household Arrears	MR425	MR 720	MR2350

ource: Fieldwork, February 1993.

Table 6.5 shows the mean average household arrears and mean current household income (gross) for the two areas under scrutiny. The table shows that *the average household arrears is nearly half of its gross monthly income* (sub-hypothesis two). This amount may not seem to be much but considering that the two areas are only three years old the amount is quite worrying, as illustrated below by Istana Dua where after a decade the mean arrears is more than double the mean household income. Furthermore, as will be shown in the later part of this chapter, the causes of arrears for short term defaulters (particularly those who have just taken their loans as in the case of these two areas) and long term defaulters (as those found in Istana Dua) differ. If Istana Dua can be used as an indicator, five years from now the mean arrears for both areas would be double their mean income, and would likely get worse as time goes on. This state of affair means that not all the monies given out on loan to the buyers could be recovered, thus further reducing the recoverable proportion of the original budget already limited by the ceiling prices of the houses. The following table shows the arrears status as at end of 1993 for all three areas.

Table 6.6 - Amount of Loan Given Out and Outstanding Arrears

	Siol Kanan	Batu Kawa	Istana Dua
Total Loan Given Out	MR7,940,000	MR12,092,000	MR11,315,000
Outstanding Arrears	MR 132,000	MR 75,000	MR 428,261
Percentage	2 %	1 %	4 %

Source: Sarawak Housing and Development Commission, February 1993.

By applying the figures calculated using the net present value model previously, the following table has been constructed to show the total amount incurred and the total income expected from sales in the provision of intermediate units to SHDC borrowers only among the sampled households in Siol Kanan and Batu Kawa. From Table 6.6, it is fair to suggests that a further

loss of at least 5-10 percent is envisaged from this recoverable amount by the time the loan term is over. This confirms our third sub-hypothesis which is *'the amount of money to be repaid, assuming a full-recovery, is just a fraction of even the total costs of the projects'*, making it very hard indeed to sustain such programmes without further injections of resources from the state. In ideal situation like Siol Kanan, assuming a full-cost recovery, only a third of the investment will be recouped, but in problematic areas like Batu Kawa, the amount could be as little as a fifth.

Table 6.7 - Total Investment and Maximum Cost Recovery for Intermediate Units Only

		Siol Kanan	Batu Kawa
1	Costs of Production	MR 70,783	MR 132,692
2	Financial Subsidy	MR 14,091	MR 14,091
3	Number of SHDC borrowers	158	255
4	Total Costs (1+2)x3	MR 13,410,092	MR 37,429,665
5	Sales Price	MR 32,000	MR 32,000
6	Total Incomes (3x5)	MR 5,056,000	MR 8,160,000
7	Overall Deficit (3-5)	MR 8,354,092	MR 29,269,665
8	Deficit per Borrower (7/3)	MR 52,874	MR 114,783

6.2 ABILITY TO PAY AMONGST RESPONDENTS

The previous section has established various affordability levels calculated from different perspectives for one and the same house. All of them are much higher than the MR750 as defined by the government. Based on the actual cost of producing these houses the affordability levels would be MR2,013 per month for Siol Kanan and MR3,774 per month for a similar unit in Batu Kawa, based on commercial interest rates. These figures corroborate the assertion that these houses were very expensive to produce and were beyond the ability of the target population to purchase, not only at this level, but even at the controlled selling price fixed by the government. The implications of these are limited production of low cost houses which are of high standards and limited number of households who benefit but who are not entitled to them. A corollary of this is that the majority of the target group for whom these houses were produced still languish without proper shelter. They do not benefit though they are entitled to the houses (horizontal rationing).

Against this background, the affordability of the respondents will now be examined by firstly looking at their rent-income and price-income ratios, and secondly at the causes why defaulters fall behind in their monthly payments toward their houses.

6.2.1 Rent-Income Ratio

It was pointed out in Chapter Two that, in a well functioning housing market, the rent-income ratio would be very low. In such a market, the supply of housing is highly responsive to demand. This means that housing supply would increase correspondingly with an increase in housing demand, thus holding down housing prices and keeping housing demand and supply in equilibrium. In the opposite situation, where the housing market is highly inelastic, the failure of housing supply to meet demand not only results in a high rent-income ratio (because of too few houses which lead to artificially inflated high prices) but also lower housing quality (due to a suppliers' market). However, as also pointed out in Chapter Two, a low value rent-income ratio does not necessarily mean a well-functioning market. Such a situation could easily be a product of the widespread application of rent-control measures that result in below-market rents, which in itself may be enticing but which will also depress the rate of housing production due to disincentives among producers (Mayo and Angel, 1993). The official rent-income level adopted by Malaysia is 0.33, higher than the general level of 0.2 for the whole of East Asia (UNCHS, 1993), but lower than the 0.4 level, plus or minus 0.05, that was suggested by Landeau (1987).

6.2.1.a Rent-Income Ratios for All Households

During the field survey, the respondents were also asked how much they were currently able to pay towards their accommodation every month in order to gauge their expressed ability to pay toward their houses. The response, as shown in Table 6.8, shows a monthly average for the whole sample population of MR210, with MR218, MR210 and MR204 respectively for Istana Dua, Siol Kanan and Batu Kawa. Based on this table, the ability to pay over income ratio (API) is calculated and is contrasted against the original rent-income and current rent-income ratios and is shown in the Table 6.9.

Table 6.8 - Ability to Pay and Income (Mean)

MR	Siol Kanan	Batu Kawa	Istana Dua	All Areas
Ability to Pay	210	204	218	210
Income per Month	920	1003	1095	1012
API	0.23	0.20	0.20	0.21

Source: Field Work, February 1993

Table 6.9 indicates that households in all three areas show a decrease in their rent-income ratios over time, with Istana Dua showing the greatest fall of all as a result of its older age, while the other two showed an almost identical rate of decrease with each other. In the case of Siol Kanan

and Batu Kawa, the figures have fallen from 0.23 to 0.20 and 0.20 to 0.16, a decrease of around 13 to 25 percent within a matter of three years. The change is greater in the case of Istana Dua with a drop of almost 30 percent after a period of around 10 years. This means than, in general, the household incomes have increased significantly to effect this fall in the rent-income ratios which are also reflected in a much higher ability to pay ratio as shown by the current API (for the whole sample population as well as for each individual housing estate). All in all, the households can afford to pay at least 15 percent above what they are currently paying which indicates improved economic conditions of the households concerned. Nevertheless, although the size of household incomes may have increased *vis-à-vis* the fixed monthly instalments, it does not necessarily follow that these households can actually keep up with the payments toward the houses.

Table 6.9 - Mortgagees Affordability

(MR)	Siol Kanan	Batu Kawa	Istana Dua	All Areas
API Ratio	0.23	0.20	0.20	0.21
RI Ratio (current)	0.20	0.16	0.16	0.17
RI Ratio (original)	0.23	0.20	0.23	0.22

Source: Field Work, February 1993

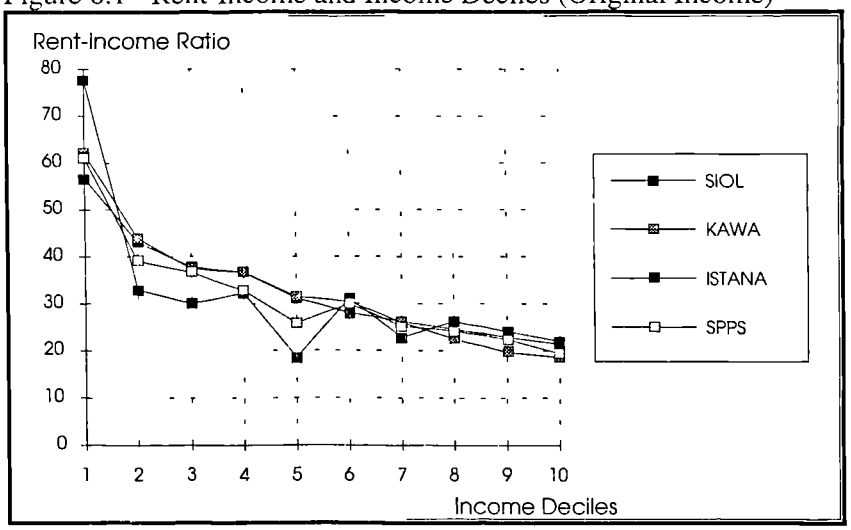
The original rent-income ratios of the study areas, as shown in Table 6.9, are found to be much lower than the level normally adopted, indicating that everyone was creditworthy and (once again) that the majority of households have income levels that are over the eligibility cut-off point. The original rent-income ratio of the whole sample population was just slightly over 0.2 and has now decreased significantly to 0.17. If the official rent-income criterion is used, none of the respondents should have any problem with loan repayments, theoretically at least, which patently is not the case as we shall prove in the later part of this chapter. Part of the reason can be explained by the basis used for the official ratio and the source of the respondents' loans. As highlighted in the previous section, the 0.33 percent used by the government is based on the national ceiling price of MR25,000, a 90 percent loan charged at a commercial rate of 12 percent, giving an "affordability monthly income" of MR750. In the case of the respondents, the loan was 95 percent of MR32000 and provided by SHDC at 5 percent interest rate. This anomaly is compounded by the presence of, as shown in the previous chapter, multitudinous households whose incomes are beyond the MR750 stipulated, resulting in rent-income ratios far below the adopted guidelines.

Moreover, the practice by the SHDC where every buyer is allowed the maximum repayment period of 25 years has allowed most buyers to pay the same amount of monthly instalments for

similarly priced houses irrespective of their age. This has helped to pushed down the rent-income ratios of most buyers especially those in the older age group whose rent-income ratio would otherwise have been much higher. For example, the mean age of the buyers when allocated the houses was 36 years but only 38 percent had a rent-income ratio of over 33 percent and 10 percent a rent-income ratio exceeding 50 percent respectively. For an average age as high as that, we would expect a much higher rent-income ratio as the repayment period would only be 19 years which should consequently mean a higher monthly instalment. In Siol Kanan, 30 percent of the buyers had a rent-income ratio of 25 percent and less compared to 32 percent in Batu Kawa and 34 percent in Istana Dua. This marginal difference is also reflected in the number of those having a rent-income ratio of over 50 percent - 10 percent in all the three areas. Thus, as far as those with the highest and lowest rent-income ratios are concerned the distribution among the three housing estates are almost identical.

So far the discussion on rent-income ratio has been focused on aggregated households only thus giving general indicators for the general sample population. It will now be shown that there are wide variances of rent-income ratios among households with different characteristics, and the burden among those below the average can be very serious. In order to illustrate the gravity of this problem the rent-income ratios are plotted against the original and current household income deciles. These are shown in the following Figure 6.1 and Figure 6.2.

Figure 6.1 - Rent-Income and Income Deciles (Original Income)



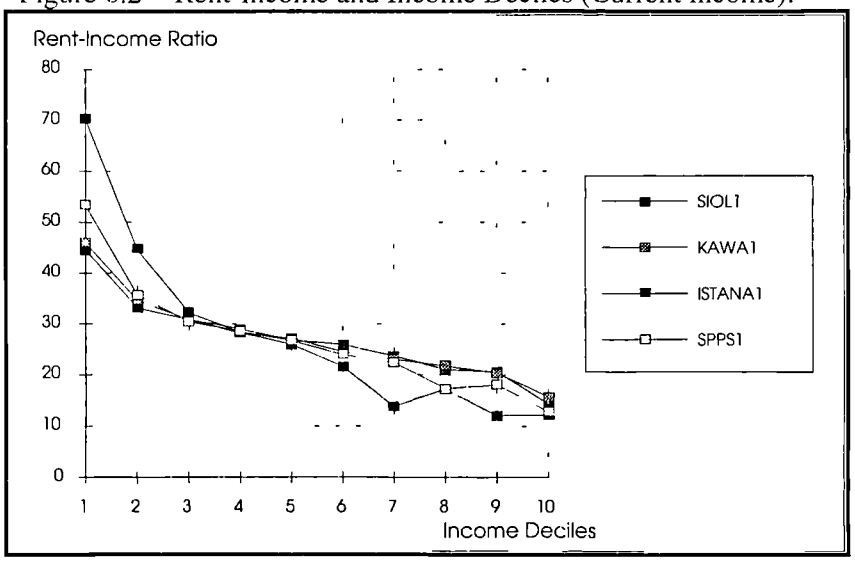
Source: Field work, February 1993.

Figure 6.1 shows the rent-income ratio plotted against income deciles based on the households' original incomes. It clearly shows that the lowest 10 percent of the income groups have a mean rent-income ratio of between half and four-fifths of their income. The second lowest decile have

a rent-income ratio ranging between a third and 45 percent. All in all, it is the four lowest deciles that are experiencing a rent-income ratio of over a third, higher than the accepted norm. The top four deciles, meanwhile, have rent-income ratios hovering around the 20-25 percent levels.

The ratios are still very high even when they are evaluated against the households' current income. As shown in Figure 6.2, the bottom ten percent has a ratio of between 0.45 and 0.7, a decrease from a ratio of between 0.5 and 0.8, while the second decile has not changed at all. While it is true that over time income increases will reduce the rent-income ratio for the households, the two figures show that the ratios of the lowest decile are almost twice the levels of the rest of the population.

Figure 6.2 - Rent-Income and Income Deciles (Current income).



Source: Field work, February 1993.

The two graphs shown in the previous two figures confirm the first part of our fourth sub-hypothesis that *'most households experience a decreasing rent-income ratios over a period of time....'*. This insignificant effect will be further illustrated by the following sub-sections where ratios amongst specific households, particularly the bottom deciles are examined according to households' income types, income groups and types of housing units owned.

6.2.1.b Rent-Income Ratio among Single and Dual Income Households

The previous sub-section has shown that the average rent-income ratio which was below the adopted official level had actually concealed the high levels experienced by the bottom 40 percent (when offered the houses) and 20 percent (when the field work was carried out) of the respondents. The following Table 6.10 will show that among the bottom three deciles of the

respondents, practically all the households that suffer from high rent-income ratios belong to households with only one wage earner, or single income households. The table shows that at least 4 percent of all households and 5 percent of single income households in any one project area had original rent-income ratios of over 0.4. The percentage of those households having rent-income ratios over the official guidelines are at least 18 percent in any one project area, most of whom are single income households.

The table again shows that the aggregate ratio for the overall sampled population has, as expected, decreased over time although some households have actually bucked the trend and actually experience an increase. Among the sampled population, this latter group is found in Istana Dua and among those households with high original rent-income ratios. From Table 6.10 it can be seen that the percentage of households with high rent-income ratios (over 0.4) for this area have nearly doubled (from 5 to 9 percent), while the number of single income households in the same category have more than trebled (from 5 to 16 percent).

Table 6.10 - Percentage Distribution of rent-income ratios of selected Household Types.

Percentage Household	Area	Status	Rent-IncomeRatio (at least)		
			0.33	0.4	0.5
All Households	Siol	Original	23	5	3
		Current	10	4	1
	Kawa	Original	25	8	4
		Current	7	4	1
	Istana	Original	18	5	3
		Current	15	9	5
Single Income Households	Siol	Original	24	7	4
		Current	10	4	1
	Kawa	Original	36	11	5
		Current	13	7	2
	Istana	Original	22	5	3
		Current	23	16	10
Dual Income Households	Siol	Original	19	0	0
		Current	0	0	0
	Kawa	Original	0	0	0
		Current	0	0	0
	Istana	Original	9	5	0
		Current	4	0	0

Source: Field work, February 1993.

The unusually high rent-income ratio for the lowest deciles can be attributed to the existence of pensioners. Istana Dua, for instance, has a rent-income ratio of almost 80 percent for its lowest

decile (see Figures 6.1 and 6.2), and the minimum income and age for the estate is MR150 and 56 years old respectively. While the concentration of pensioners in Istana Dua has helped skew the distribution, characteristics other than retired heads of households are also believed to be responsible for the high ratios. The following Table 6.11 separately looks at the lowest and highest deciles of joint incomes of all, single and dual income households.

Table 6.11 - Lowest and Highest Original and Current Rent-Income Ratios for All, Single Income and Dual Income Households.

Households		Deciles				3rdQuartile		Mean	
		First		Tenth					
		Low	High	Low	High	Low	High	Low	High
All	Ori	33	**48**	15	16	17	34	20	23
	Cur	**40**	**58**	10	14	11	29	16	20
Single Income	Ori	*35*	**52**	18	22	21	*36*	33	*37*
	Cur	**42**	**76**	13	16	14	33	27	32
Dual Income	Ori	27	**44**	14	15	15	31	27	31
	Cur	22	*35*	6	14	11	20	18	23

Note: Italicised figures are levels hovering below the maximum of 40 percentage recommended by Landeau. Bold figures are level above this limit.
Ori - Original Cur - Current
Source: Fieldwork, February 1993.

The table shows that. for the majority, affordability does not seem - on the surface at least - to be a problem. For instance, the household with the highest original rent-income ratios at the 3rd Quartile, with a ratio of 36, is the single income household while for the dual income household the highest ratio is 31. The current situation is much more favourable where the highest 3rd Quartile rent-income ratio among the single income and dual income households has fallen to 33 and 20 respectively. Except for the lowest decile group among the single income households, households and deciles generally reflect a decreasing rent-income ratio over time. For this lowest decile among the single income household, the lowest and highest recorded rent-income ratio have increased from 35 and 52 to 42 and 76 respectively.

Thus, the contention that the rent-income ratio decreases as income increases over time does not hold true among the lowest income deciles and single income households, thus proving the second part of our fourth sub-hypothesis that '...., *but among the poorer households the ratios have actually increase'*. This increase in rent-income ratios among the lowest income group is shown in greater detail in the Table 6.13 where the lowest three income deciles are shown individually for the three areas of Siol Kanan, Batu Kawa and Istana Dua. Observations for all households show increases only in the Istana Dua housing area and involve only the bottom two deciles. In all three estates, the lowest deciles display the high ratio value from around the high

of 40 percent suggested by Landeau (1987) to as high as 58 percent in Istana Dua. For single income households, the same trends are repeated but at a slightly greater degree. What is notable is the single income household's current ratio of 76 percent for the lowest decile in Istana Dua, an increase of almost 20 percent.

Table 6.12 - Original and Current Rent-Income Ratios for the Lowest Three Deciles for All and Single Income Households.

Household	Area	Income Deciles					
		First		Second		Third	
		Ori	Cur	Ori	Cur	Ori	Cur
All	Siol	**44**	**40**	*35*	32	*38*	30
	Kawa	**48**	**40**	*36*	28	34	27
	Istana	33	**58**	25	33	29	26
Single Income	Siol	**45**	**42**	34	32	33	30
	Kawa	**52**	**44**	*38*	*34*	*37*	27
	Istana	*35*	**76**	25	**46**	34	32

Note: Italicised figures are levels hovering below the maximum of 40 percentage recommended by Landeau. Bold figures are level above this limit.
Ori - Original Cur - Current
Source: Fieldwork, February 1993.

6.2.1.c Rent-Income Ratio among Target and Non-target Households

Table 6.13 - Original and Current Rent-Income Ratios for Target and Non-target Households.

Household Status		Siol Kanan			Batu Kawa			Istana Dua		
		1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd
Targeted	- Ori	**52**	*39*	*39*	**55**	**47**	*39*	**48**	18	25
	- Cur	**46**	**40**	32	**50**	**41**	34	**85**	**70**	**47**
Non-target	- Ori	22	26	26	21	26	24	19	30	28
	- Cur	26	25	27	27	24	25	25	25	22

Note: Italicised figures are levels hovering below the maximum of 40 percentage recommended by Landeau. Bold figures are level above this limit.
Ori - Original rent-income ratio Cur - Current rent-income ratio
Source: Fieldwork, February 1993.

Similar observations can be drawn if households are differentiated by their income levels. The three lowest deciles for all three project areas are shown in Table 6.13 by target and non-target groups. While the ratios for the non-target groups are low as expected, those of the target group display the same trend as single income households. The trends in Istana Dua too are mirrored here, confirming the retired heads of household factor. In this case, all three lowest deciles show a dramatic increase while the corresponding deciles in the other two areas show a consistent decrease. All the three lowest deciles have ratios higher than Landeau's maximum, again

confirming the vulnerability of these two single income and target households. For Istana Dua, the ratios have increased from 48 to 85, 18 to 70 and 25 to 47 percent respectively for the first, second and third deciles.

The fairly substantial number of very low income house purchasers in this income decile are evidence of the liberal approach adopted by SHDC. If conventional norms were adopted people in this lowest income decile would not have succeeded in getting their houses. This positive attitude is, however, outweighed by the heavier concentration of the higher income earners (earning more than the prescribed MR750 a month) at the other end where 40 percent or the top 4 deciles had a rent-income ratio of only around 20-25 percent.

6.2.1.d Rent-Income Ratios among End and Intermediate Unit Owners

The rent-income ratio also differs greatly between those owning end units and intermediate units simply due to the difference in prices between the two. The API as shown in Table 6.8 is very close to the current rent-income ratio of the end unit owners as shown in the following Table 6.14 but very different from those owning intermediate units. This means that these end lot owners were paying slightly more than they could afford in the beginning. Even then, these levels were still way below the suggested figure of 0.4 by Landeau (1987). What it shows here is that even those owners who had to pay more for their end units should have no problem with debt servicing as their rent-income ratio was equal to or slightly lower than their API. More significantly, it was almost half of the formal guideline adopted in this circumstance (Landeau, 1987). Although this makes good business sense, it again shows that most, if not all, of the respondents were not entitled to these houses in the first place.

Table 6.14 - Rent-Income Ratio

Area	Status	End Units	Intermediate	All Units
Siol	Original	0.26	0.21	0.23
	Current	0.23	0.18	0.20
Kawa	Original	0.24	0.17	0.20
	Current	0.20	0.14	0.16
Istana	Original	0.22	0.23	0.23
	Current	0.18	0.16	0.16
Siol	Original	0.25	0.20	0.22
	Current	0.20	0.16	0.17

Source: Field Work, February 1993.

6.2.2 Price-Income Ratio

Price-Income ratio is defined as the house purchase price divided by the borrower's annual income and is expressed in years of income (Landeau, 1990). It is an indicator showing the borrower's ability to own the house which largely depends on the price of the house. The higher the selling price relative to the annual household income, the higher will be the ratio and in this situation the smaller proportion of the population will be able to purchase a house. In such an instance, the high selling price is an indication of an indifferent market where a sizeable demand is not met by a corresponding supply. A high ratio shows that the market has an unresponsive supply system while a lower ratio reflects a highly responsive system. At the same time, a low indicator can also mean that demand is depressed owing to absence of tenurial security or some other reasons. In a study in South Africa, for instance, enforced spending on travel in the highly segmented apartheid cities reduces price-income ratio to a very low level (Mayo, 1993). The size of this ratio therefore illustrates how well the housing market functions, and is in fact a better indicator of the market than the rent-income ratio (Mayo and Angel, 1993).

In the study conducted by the UNCHS (1993) it was found that price-income ratio ranges from a low of 0.7 to a high of 14.8 with a median value of 5.0. The median ratio for developing countries is 5.5, with the ratio for individual countries ranging from a low of 2.5 for Thailand to 7.5 for Tunisia. For countries in East Asia only, the median is 4.15 as compared to Malaysia's value of 6.0. Landeau (1987) considers 5 to be high but acceptable for developing countries.

6.2.2.a Price-Income Ratio for All Households

A look at the house price-income (PI), i.e., house price expressed as annual incomes, would confirm this. The original price-income ratio for the whole sample population is 3.6 with the intermediate units having a value of 3.5 and the end units with 3.8 (see Table 6.15). Even Istana Dua with its slightly more expensive houses, had a price-income ratio of only 3.9 with the end lots going up to a high of just over 4.1. This, coupled with the high percentage of savers, the high proportion making changes to their houses, and the huge amount spent on these changes, show that every one of the respondents could more than afford the houses and could even be ineligible for them. Except for the end lot owners in Istana Dua, the ratios for the other two areas, including the aggregated population for all three, hover slightly below 4.0. All in all, the ratios range between medium to high on the scale suggested by Landeau.

Table 6.15 - Price-Income Ratio by Unit Type and Area (Years).

Units	Siol Kanan		Batu Kawa		Istana Dua		All Areas	
	Past	Pres	Past	Pres	Past	Pres	Past	Pres
End	3.8	3.3	3.7	3.1	4.1	3.3	3.8	3.2
Inter	3.4	2.9	3.3	2.7	3.8	2.6	3.5	2.7
All	3.5	3.1	3.4	2.8	3.9	2.7	3.6	2.9

Source: Field Work, February, 1993.

It should be noted here that, while these figures reflect the factual situation in study areas, they do not reflect the affordability level of the low income group as targeted. The earlier section of this chapter has established the high incidence of households which do not fall within this category. Group differences, for instance dividing households by target and non-target groups, may show a completely different picture from the aggregated representation.

6.2.2.b Price-Income Ratio among Single and Dual Income Households

Table 6.16 - Distribution of PI Ratios of Selected Household Types (%)

Households	Area	Status	Price-Income Ratios			
			> 4	> 5	> 6	> 10
All	Siol	Original	35.2	13.6	3.4	0
		Currrent	26.1	5.4	2.2	0
	Kawa	Original	37.4	18.2	8.1	0
		Current	16.9	5.4	2.3	0
	Istana	Original	58.4	14.6	7.9	0
		Current	23.9	12.0	6.8	1.7
Single Income	Siol	Original	38.7	14.5	4.8	0
		Current	30.0	14.5	4.8	0
	Kawa	Original	47.3	24.3	8.1	0
		Current	38.5	15.4	7.7	0
	Istana	Original	69.7	18.2	9.1	0
		Current	30.6	15.3	9.4	2.4
Dual Income	Siol	Original	27.9	11.5	0	0
		Current	0	0	0	0
	Kawa	Original	8.0	0	0	0
		Current	3.8	0	0	0
	Istana	Original	16.1	4.3	0	0
		Current	6.3	3.1	0	0

Source: Field work, February 1993.

While the average levels seem acceptable, there is still a high variation of households having a ratio of 5 and above: among all households there were at least 13 percent, 14 percent among single income households and 4 percent among dual incomes in all three areas. The highest concentration is among single income households in Batu Kawa where 24 percent had

original price-income ratio levels above 5. The current situation has shown some improvements where some 5 percent and 15 percent of all households (all and single income only) still had a high ratio of above 5 in any one project area. The most noteworthy is the situation in Istana Dua where, after ten years, a considerable proportion of the households still have a price-income ratio of more than 5, with the single income households suffering most.

The middle 50 per cent of the original price-income ratios for all households were between 3.5 and 5.5. These figures were almost identical with those for single income households (3.0 and 5.5), but higher than the ratio for dual income households (2.5 and 4.5). As pointed out earlier in this chapter, total income of households with dual incomes are generally higher than those of single income households where only the heads of households work. However, incomes of the heads of single income households tend to be higher than the heads of dual income households. There is no significant changes between the original inter quartile range with the current ratios. All three groups show a consistent decrease of 0.5 and less.

Table 6.17 - Selected Original and Current Price-Income Ratios for All, Single and Dual Income Households.

		All Households				Single Income H/holds				Dual Income H/holds			
		Original		Current		Original		Current		Original		Current	
		L	H	L	H	L	H	L	H	L	H	L	H
Decile	1	6.0	7.0	5.5	8.0	6.0	7.0	5.5	10.0	3.5	6.0	3.0	4.5
	10	2.0	2.5	1.5	2.0	2.5	3.0	2.0	2.0	2.0	2.0	1.5	2.0
InterQ		3.5	5.5	3.0	5.0	3.0	5.5	2.5	5.0	2.5	4.5	2.0	4.5
Mean		3.4	3.9	2.7	3.1	4.0	4.5	3.4	3.8	2.9	3.5	2.3	2.5

Note: L - Lowest H - Highest
Source: Fieldwork, February 1993.

For the poorest ten percent of all households and households with single income, the price-income ratio ranged between 6.0 and 7.0. Interestingly, the ratios for households with dual income ranged from a low of 3.5 to 6.0. Again, the supplementary income brought in by the spouses has helped to raise the income levels of some households resulting in a reduced ratio of 3.5. Comparing these original figures with the current ratios provides some interesting findings. While ratios for dual income households have decreased over time, showing an improvement in income levels, corresponding figures for all households and single income households instead show an increase at the top range. For single income households the limit has increased from 7.0 to 10.0 while for all households, this has gone up from 7.0 to 8.0. Explanations for these upward trends are not clear here because the households have been aggregated together by single or dual incomes. It is when the households are examined by areas that the changes become significant especially where there is a substantial proportion of heads in the older age groups.

This is shown in Table 6.18 and Table 6.19 below when the households are separated as single and dual income households.

Table 6.18 - Original and Current Price-Income Ratios for the Lowest Three Deciles for All and Single Income Households.

		Income Deciles					
		First		Second		Third	
		Ori	Cur	Ori	Cur	Ori	Cur
All	Siol	**6.0**	**5.6**	*4.9*	*4.5*	*4.6*	4.1
	Kawa	**6.9**	**5.4**	**5.1**	3.9	*4.6*	3.7
	Istana	***6.8***	***8.0***	**5.1**	*4.9*	*4.8*	4.2
Single Income	Siol	**6.1**	**5.6**	*4.8*	*4.5*	*4.6*	4.1
	Kawa	**7.2**	**5.8**	**5.4**	*4.6*	**5.2**	3.8
	Istana	**6.9**	**10.2**	**5.2**	**6.3**	*4.8*	*4.9*

Note:Italicised figures are levels hovering below the maximum of 5 recommended by Landeau. Bold figures are level above this limit.
Ori - Original Cur - Current
Source: Fieldwork, February 1993.

A striking aspect of the Table 6.18 is the increased price-income ratio levels among the poorest 30 percent of the single income households in Istana Dua, with the greatest increase in the lowest decile from 6.9 to 10.2. This huge margin is reflected in the lowest decile for all households in the project area, from 6.8 to 8.0. At the upper end, the situation is reversed where the richest ten percent had their original price-income ratio reduced from 2.5 (lowest) and 3.0 (highest) to 2.0 for single income households and from 2.0 and 2.5 to 1.5 and 2.0 respectively for all households (Table 6.17).

Table 6.19 - Original and Current Price-Income Ratios for Single and Dual Income Households

Household Types		Siol	Kawa	Istana
Single Income	Original	4.0	4.2	4.5
	Current	3.5	3.4	3.8
Dual Income	Original	3.5	2.9	3.4
	Current	2.5	2.3	2.4

Source: Fieldwork, February 1993.

The price-income ratios for single and dual income households were also calculated to test the ratio levels between the two groups. The resulting figures as shown in Table 6.19 reflect the situation as expected, that the price-income ratios for dual income households are lower than their single income counterparts. The difference between the two are consistent throughout the three project areas, and even the difference between current and original price-income ratios for all reflect a steady decrease. This finding further corroborates the finding regarding the

decreasing rent-income ratios earlier, where the increase in income over time has resulted in lowering the rent-income ratios, and in this case the price-income ratios.

6.2.2.c Price-Income Ratios for Targeted and Non-targeted Groups

Table 6.20 - Original and Current Price-Income Ratios for Target and Non-target Households.

Household		Target		Non-Target		All	
Status		Original	Current	Original	Current	Original	Current
Siol	All	4.8	4.5	3.2	2.9	3.5	3.1
	1st	7.3	6.4	3.2	3.7	-	-
	2nd	5.5	5.5	3.7	3.5	-	-
	3rd	5.0	4.5	3.7	3.7	-	-
Kawa	All	5.2	4.5	2.9	2.8	3.4	-
	1st	7.6	6.6	3.0	3.8	-	2.8
	2nd	6.6	5.8	3.5	3.4	-	-
	3rd	5.5	4.8	3.3	3.4	-	-
Istana	All	4.9	5.8	3.3	2.7	3.9	-
	1st	7.6	11.9	3.4	2.4	-	2.7
	2nd	6.1	9.6	4.2	4.0	-	-
	3rd	5.1	6.7	4.0	3.7	-	-

Source: Fieldwork, February, 1993.

Table 6.20 illustrates the different levels of price-income ratios between the two groups. It substantiates the belief that the non-targeted households' original and current price-income ratios are lower than those of the targeted households. As stated previously, the existence of retired heads of households shows itself clearly here in the data for Istana Dua where, against the trend, the price-income ratio of the targeted households has increased from 4.9 to 5.8. This is hidden in the price-income ratios for all households where there is a decrease from 3.9 to 2.7. No such trend is noticeable among the non-targeted households, even if such retired heads of households exist. This is because even at retirement, the pensions received could sometimes be higher than incomes earned by their poorer peers[4].

6.2.3 Affordability of the Sample Population

A proper assessment of a household's affordability must be based on more than one ratio as single ratio affordability calculation is flawed (Malpezzi *et al*, 1985). A low price-income ratio can only reveal the relationship of the income of the household to the price of the house but not its present financial commitments. Landeau (1990) suggests that rent-income ratio and price-

4 Government pension is half of the pensioner's last drawn salary.

income ratio should simultaneously be checked in deciding a household's affordability element. His typology of acceptable rent-income ratio and price-income ratio is reproduced in Figure 6.3.

Figure 6.3 - The Relationship between price-income and rent-income

		Price-Income Ratio	
		Low	High (over 5)
Rent-Income Ratio	Low	AUTOMATIC APPROVAL	GOOD RISK
	High (over 40 percent)	ACCEPTABLE (watch other commitments)	RISKY

Source: Landeau (1990).

The cross-tabulation between the rent-income ratio and price-income ratio are shown in Table 6.21 for the worst affected deciles and housing categories. These high levels are concealed in aggregated figures taken for the whole project areas where no households have price-income ratios of over 5 and rent-income of over 0.40. What this table confirms is the ineligibility and high risks of the lowest income decile of the overall sample population if the traditional price-income and rent-income recommended levels are applied. The findings have identified two of the, theoretically, worst affected household categories:

Table 6.21 - High rent-income ratio and price-income ratio in the worst affected deciles and household categories for all three areas.

		All		Single Income			Target Group		
	Deciles	1st	2nd	1st	2nd	3rd	1st	2nd	3rd
Siol	Price-Income	**6**	*4.9*	**6.1**	*4.8*	*4.6*	**7.3**	**5.5**	**5.0**
	Rent-Income (%)	**44**	35	**45**	34	33	**52**	*39*	*36*
Kawa	Price-Income	**6.9**	**5.1**	**7.2**	**5.4**	**5.2**	**7.6**	**6.6**	**5.5**
	Rent-Income (%)	**46**	*36*	**52**	*38*	*37*	**55**	**47**	*39*
Istana	Price-Income	**6.8**	**5.1**	**6.9**	**5.2**	*4.8*	**7.6**	**6.1**	**5.1**
	Rent-Income (%)	33	25	34	25	34	**48**	18	25

Note: Italicised figures are levels hovering below the maxima of 5 and 40 percentage recommended by Landeau. Bold figures are level above these limits.
Source: Field work, February 1993.

1 the target group - the group who is supposed to benefit most and is considered to have the affordability based on the controlled house price; and

2 the poorest 30 percent (as opposed to only 20 percent for the overall project population) of the single income households.

These findings are more serious than can be realised since the ratios of these high risks households are actually low in that their loans were provided by the SHDC with handsome subsidy on the interest rates. If the loans were taken from the commercial finance market, their ratios would undoubtedly be much higher. These increasing ratios among the lowest percentiles of the population, in this case households with single income and households within the target group, may have a direct link with arrears, a question which will be addressed in the next section. It also questions the wisdom of applying a blanket eligibility level and treating households as homogenous when clearly they are not. It also disputes the argument in favour of increasing rather than fixed monthly loan service. Certainly, further classification of mortgagees could help, for instance, by relating the household's income to age of household's head as well as between single and joint income households.

It must again be pointed out, however, that the contradictions shown in Istana Dua may be due to SHDC's own peculiar practice. As pointed out earlier, no age limit is applied to the applicants and successful applicants are given a maximum period of 25 years to repay the loan. It is suspected that most of those who are experiencing an increase in their rent-income ratios are those who have retired (immediately halving their monthly incomes).

6.3 DETERMINANTS OF ARREARS

This section aims to show whether rent-income ratio and price-income ratio are sufficient to measure a household's affordability level by examining their incidence of arrears and the determinants of these arrears.[5] The incidence of arrears as an indicator of one's affordability may seem to be over-simplified, but nevertheless, it is the nearest measure of one's affordability as it is the only solid evidence of one's inability or unwillingness to pay for his house.

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5 Unwillingness to Pay factor is not used as a determinant variable in the regression model due to two underlying reasons. One is the difficulty in eliciting objective response on the subject from respondents, and two, the absence of defaulters among the group most likely not to pay since they view these houses as government gifts, i.e., those allocated houses by virtue of their links or support provided by their political representatives. It is however recognised that there are unwilling payers but the incidence is assumed here to be too low to affect the outcome of the model.

Table 6.22 - Number of SHDC Mortgagees (Total Population)

	Siol Kanan	Batu Kawa	Istana Dua	All Areas
Houses	247	374	324	945
Borrowers	229	339	252	820

Source: Sarawak Housing and Development Commission, 1993

Data on arrears was derived from the SHDC's computer data. Since SHDC does not keep records of buyers who bought the houses using loans from other sources, only payment records of the SHDC's own borrowers are available. The majority of the house owners took their mortgage from the SHDC.

Table 6.23 - Distribution of Arrears among Mortgagees (Total Population)

(percent)	Siol Kanan	Batu Kawa	Istana Dua	All Areas
No arrears	51.0	49.0	54.0	51.0
1 - 3 months	44.0	36.0	25.0	37.0
4 - 6 months	3.0	7.0	6.0	6.0
7 - 9 months	0.0	2.0	2.0	2.0
10 and more	2.0	6.0	13.0	4.0

Source: Sarawak Housing and Development Commission, 1993

Out of the total 945 buyers, 125 or 13 percent had either paid up the loan or borrowed from another source leaving 820 or 87 percent borrowing from the Commission itself. Siol Kanan has the highest proportion of borrowers with the Commission (93 percent) followed by Batu Kawa (91 percent). Istana Dua, probably because it is the oldest of the three had only 78 percent of the households having loans with the Commission. In terms of the proportion of defaulters, Batu Kawa had the highest number of borrowers with arrears (51 percent), followed by and Siol Kanan (49 percent) and Istana Dua (46 percent). However, the high percentage may be partly caused by payment procedures where sometimes money transfer from the banks or directly from the employers take a couple of months, on average, to reach the Commission. We allow for a three month backlog before payment is credited, to obtain a conservative picture.

Table 6.24 - Amount of Arrears among Defaulting Mortgagees (Total Population)

(percent)	Siol Kanan	Batu Kawa	Istana Dua	All Areas
MR1 - 249	59.2	46.2	34.8	46.3
MR249 - 499	20.4	17.9	12.2	16.8
MR500 - 749	10.2	7.5	13.6	10.1
MR750 - 999	6.1	6.0	3.0	6.0
MR1000 and over	4.1	22.4	36.4	20.8

Source: Sarawak Housing and Development Commission, 1993

As of January 1, 1993, 12 percent of these borrowers were in arrears of 4 instalments or more. Istana Dua had the highest proportion (21 percent), followed by Batu Kawa (15 percent) and then

Siol Kanan (5 percent). Again, Istana Dua had the most persistent of defaulters with more than around a third falling behind their payment by a year. The average number of months by which rent had been in arrears were 2.2, 3.6 and 11.8 months for Siol Kanan, Batu Kawa and Istana Dua respectively.

Of those who have fallen behind in their instalments, 12 percent were owing more than MR1000 with the highest concentration, again, in Istana Dua (20 percent). Although the average amount by which the rent had been in arrears was MR423, MR716 and MR2347 for Siol Kanan, Batu Kawa and Istana Dua respectively, the median for the three respective areas were only MR223, MR379 and MR628.

Table 6.25 - Mean and Median Arrears (Amount and Months)

	Siol Kanan	Batu Kawa	Istana Dua	All Areas
Mean MR	423	717	2347	995
Mean Months	2.2	3.6	11.8	5.1
Median MR	223	379	628	379
Median Months	1.0	2.0	3.0	2.0

Source: Field Work, February 1993

The following analyses are based on the data collected from the sample population. Only observations with complete information on the necessary variables are selected for the analyses. Two linear regression analyses are carried out against the dependent variable arrears. One, a straightforward multiple regression, and the other a logistic regression. The multiple regression analysis will identify the determinants of these arrears, and this would enable us to discern the respondents who have affordability problems, and why. The logistic analysis will identify the regressors which have the highest probability to cause arrears among borrowers. The output of both analyses can either confirm or disprove the accuracy of using the borrowers' rent to income ratio only as a yardstick to measure their affordability, as widely practised by financial lenders. The identification and selection of independent variables (both continuous and dummy) are shown in Appendix 6.3 while the associated diagnostic tests and their results are shown in Appendix 6.4.

By any measure, the sample size collected for this study is large at 40 percent of the true population. However, this size is greatly reduced as only defaulters are considered for the model. This size is further reduced by categorising defaulters into two groups, those with three month arrears and less, and those with four month arrears and more. This problem with small sample size became apparent when initial runs were carried out separately by project areas. In Siol Kanan, for instance, out of the original sample size of 93 households (38 percent), only 5

households or 2 percent fulfilled the requirements. The basis for categorisation is the assumption that the latter group is made up of those who are likely to be 'perpetual' defaulters who find it difficult to catch up with their payments and in the long run would accumulate beyond their control. The former group will be made up of, more likely than not, 'transient' defaulters who default not because of affordability problem but more due to other causes,[6] and who could easily sort out this problem later. By categorising the defaulters into these two groups, reasons why people default in the short and long term could be distinguished and identified. The following table summarises this process:[7]

Table 6.26 - Selection Process of Final Sample Size

	Siol Kanan		Batu Kawa		Istana Dua		All Areas	
	No	%	No	%	No	%	No	%
Sampled households	93	100	138	100	120	100	351	100
With arrears (all)	47	51	67	49	66	55	180	51
With arrears (4 +)*	5	2	20	5	30	9	60	7
With arrears (3 -)**	42	17	47	13	36	11	120	12

Source: Field Survey, March 1993

In order to make the sample size workable, the final samples for all the three areas are grouped together and analysed as one. The size of this sample is 60 which makes up just over 5 percent of the true population size. Apart from the continuous variables, dummy variables are also created to enable one to see their individual contribution towards the model. Two regression analyses will run, one for those with four and/or more arrears (marked * in the above table) and from now on referred to as Sub-Sample A, and the other for those with three and months arrears and less (marked ** in the above table) and from now on to be referred to as Sub-Sample B. For the logistic analysis, only the sample population from Istana Dua will be used. This is because they contribute most to the number of defaulting households and amount of arrears as well as its older age which gives it an edge in terms of assessing the probability of becoming defaulters among the households. Regressor or independent variables used for the analyses are selected from a list of nineteen, eleven continuous and eight discrete (see Appendix 6.3). Their selection for inclusion in all the three models are selected by stepwise regression.

6 These could include extra financial burdens due to expenses prior to and when moving into these houses, or as explained by the Financial Officer of the SHDC, the delay in monetary transfer between the paying institution to the SHDC.

7 Percentage figures are expressed as proportions of the true household populations.

6.3.1 Multiple Regression Analysis - Sub-Sample A[8]

The resultant analysis from the stepwise regression for this model, as displayed in the following Table 6.27, shows that of the 19 regressors included only three are statistically significant at the 0.15 F significance level to stay, and these three variables are then used in the final regression model.

Table 6.27 - Summary of the Stepwise Output for Sub-Sample A

Step	*Variable*	*Partial R**2*	*Model R**2*	*Prob>F*
1	RI (Original Rent-Income Ratio)	0.185	0.185	0.0006
2	YPC1 (Log Current Income per Capita)	0.196	0.381	0.0001
3	NTGroup (Income Group)	0.053	0.434	0.0260

Source: Field Work, February 1993.

The results of the model as shown in Table 6.28 are based on 59 households for which information was available on all the variables in the model, out of the 60 households with arrears of 4 months or more. The adjusted R^2 value or the coefficient of determination from the regression result as shown in the Table 6.28 shows that at least 40 percent of the variance in arrears can be explained by the model. Although small, this is not uncharacteristically low for cross-sectional data, in this case from three housing areas, and is sufficient considering the small sample size used. Furthermore, a regression model only computes the variables that are given as inputs, which in most cases depend on availability of comprehensive data, in this case only observations with all the 19 variables are included. If more variables were to be included, the sample size may have been reduced unless all the observations have complete information on these added variables. Even then these complete information may not necessarily be free from errors of measurement and would still affect the size of the R^2 value. The table also shows that the F value is calculated at 14.301. From the critical values for F table, even at the 0.01 significance level, the model is statistically significant.

The t test for the parameter estimates show that all coefficients are statistically significant at 0.01, thus rejecting the null hypothesis. Thus, this model is a true model although a weak one. Table 6.28 also shows that the Prob>F or the p-value indicates a significance regression at the 0.15 level. Of the three variables entered in the final model, the original rent-income ratio (RI) and the current income per capita (YPC1) were shown to be the most statistically significant with scores of 0.0006 and 0.0001 respectively. They are then followed by income group (NTGROUP) with the Prob > |T| score of 0.026.

8 This is made up of those who have at least three instalments behind in their payments.

Table 6.28 - Regression Output for Sub-Sample A

Variable	*Parameter Estimate*	*Standard Error*	*T statistic*	*Prob > |T|*
INTERCEPT	7.2710	0.3906	18.61	0.0001
RI	7.4942	1.2166	6.16	0.0001
YPC1	-0.0043	0.0009	-4.94	0.0001
NTGroup	0.6048	0.2644	2.29	0.0026
No of observations	59			
R-square	0.4338			
Adj R-sq	0.4035			
F Value	14.301			Prob>F = 0.0001

As already pointed out earlier, the smallness of the adjusted R^2 value, at 0.4035, is statistically significant even at the 0.01 level, or there is only 1 in a 100 chance that the null hypothesis is true, meaning the model is a true model albeit a weak one. Nevertheless, the model can be used accurately to predict arrears as can be observed from the t statistics of the coefficients. All the correlation coefficients have been found to be statistically significant, again at the 0.01 level, thus statistically significant from 0. The relationship derived from the model is,

ARRS = 7.271 + 7.4942**RI** - 0.0043**YPC1** + 0.6048**NTGroup**

and is consistent with the arrears hypothesis as will be elaborated below.

The parameter estimates show that one of the two discrete variables used in the model, original rent-income ratio (RI), has a positive relationship with arrears, while the other, current income per capita (YPC1), has a negative relationship, and are expected to be thus. The higher is the rent-income ratio, the heavier the financial burden is on the household, thus increasing the possibility of defaulting in loan servicing. This directly proves our fifth sub-hypothesis which is '*high original rent-income ratio, a trademark of the low income households, is one of the major causes of arrears*'. From the model, it has been actually been identified as the main cause for defaulting, not simply one of the main causes, with a partial R-sq. value of 0.185 (see Table 6.27). As regards the other discrete variable, i.e., current income per capita (YPC1), supports the belief that the higher is the per capita income, the better the household can afford to service the mortgage loan. What it means here is that the higher the income per capita the less likely the household is to fall into arrears. Again, like rent-income ratio, it is identified as a major contributor in this model with a partial R-sq. value of 0.196 (see Table 6.27). Since household income, original and current, do not appear as significant from the model, this supports our seventh sub-hypothesis which is '*income per capita, and not gross household income, is more influential in determining whether a household defaults or not*'.

The result for the only dummy variable in the model, i.e. non-target income group (NTGROUP) is more deceptive. While it is expected that those within the target group would be the main defaulters, it is found that the non-target group seems to be the worst culprits. This is confirmed by checking the mean arrears for both groups; the mean for the non-target group is MR2,324 while that for the target group is 25 per cent less at MR1,759. This situation may have arisen because of other factors, such as, as shown above, current income per capita. It is also possible that households with higher incomes are much more prepared to fall into arrears, either in their belief that the next month's salary could settle it all or that, being better educated they are more knowledgeable about rules and laws and are thus more prepared to take risks. This identification of non-target group as one of the determinant of arrears supports our sixth sub-hypothesis which is *'the non-target group suffers from affordability problem and falls into arrears as much as the target group'*, although surprisingly, the target group does not appear in the model at all.

On the whole, the result of the model, where original rent-income ratio (RI) and current income per capita (YPC1) are identified as the main determinants of arrears, not only support the use of such a ratio as a basis to gauge one's affordability but also points to the need to look at a household's income per capita. The identification of higher income households as another determinant concurs with other similar studies, for instance Klak's (1992b), where arrears are found to be scattered throughout the mortgage borrowers and independent of income levels. However, unlike Klak's other finding, none of those who got these houses through political support are among the defaulters.

6.3.2 Multiple Regression Analysis - Sub-Sample B[9]

Table 6.29 - Summary of the Stepwise Ouput for Sub-Sample B

Step	*Variable*	*Partial R**2*	*Model R**2*	*Prob>F*
1	RI (Original Rent-income Ratio)	0.0800	0.0800	0.0096
2	YPC1 (Log Current Income per Capita)	0.1661	0.2461	0.0001
3	AGE1 (Log Current Age)	0.0277	0.2738	0.0866
4	CSCHG (Costs of Changes to House)	0.0260	0.2998	0.0927
5	DURA (Length of Stay)	0.0196	0.3193	0.1409

Source: Field Work March 1993

In order to compare the findings for Sub-Sample A as discussed above, the same procedure was repeated for Sub-Sample B, or those who are behind by three payments or less. Two outputs, one

9 This is made up of those who have three and less payments in arrears

from the stepwise regression model showing the selected variables and the other from the regression model itself are shown in the Table 6.29 and Table 6.30 respectively.

Table 6.30 - Regression Output for Sub-Sample B

Variable	*Parameter Estimate*	*Standard Error*	*T statistics*	*Prob > |T|*
INTERCEPT	2.6589	1.1329	2.35	0.0215
RI	3.9550	0.7012	5.64	0.0001
YPC1	-0.0016	0.0004	-4.26	0.0001
AGE1	0.4159	0.2224	1.87	0.0653
CSCHG	0.1900	0.1072	1.77	0.0803
DURA	0.1435	0.0965	1.49	0.1409
No of observations	82			
R-square	0.3193			
Adj R-sq	0.2751			
F Value	7.225			Prob>F = 0.0001

Source: Field Work March, 1993.

The variables selected by the Stepwise Regression for this group differ slightly, as shown in Table 6.29, from those for Sub-Sample A. Two of the three regressors identified as significant for Sub-Sample A, original rent-income ratio (RI) and current income per capita (YPC1) are also significant for this group, while income group (NTGroup) does not appear in the equation at all. Besides these two, three other variables have also been identified as significant at the F statistic level, and these are costs spent on changes done on the houses (CSCHG), the current age of the respondents (AGE1) amd length of stay (DURA). Current income per capita (YPC1) is found to be singularly dominant in influencing the incidence of arrears in this model with a Partial R-sq. value of 0.166 (see Table 6.29), while the other are less so. These five variables were used in the final model for this group and the output of the model is shown in the above Table 6.30.

All the five regressors show the expected sign. For the only dummy variable in the model, the duration of stay (DURA), indicates a positive relationship suggesting that the longer one stays the greater is one's incidence of arrears. The fact that it did not appear as a determinant in Sub-sample A is a surprise. This, however, could be explained by the fact that the number of households with very high arrears is diluted by those with low (but more than three payments) arrears due to the presence of households from Siol Kanan and Batu Kawa in the model. As shown in Table 6.26, almost half the households in this group come from these two areas, and this combined with the households in Istana Dua with low arrears (but more than three payments) would dilute the influence exerted by households with high arrears. Likewise, its (DURA)

presence in this model could possibly be due to the fact that most of the households who are behind their payments for three months and less come from Istana Dua.

All continuous variables have a positive relationship with arrears except for current income per capita (YPC1). Current income per capita (YPC1) and original rent-income ratio (RI) are both pretty straightforward and their behaviour are consistent with those in the first regression model for Sub-Sample A. For the former, it again supports our seventh sub-hypothesis, i.e., *'income per capita, and not gross household income, is more influential in determining whether a household defaults or not'*, while the later supports, yet again, our fifth sub-hypothesis which is *'high original rent-income ratio, a trademark of the low income households, is one of the major causes of arrears'*.

The final two variables, current age (AGE1) and costs of changes made to the houses (CSCHG) are also straightforward. This first is understandable since, in this case, there may be a fair number of the respondents who have only recently retired and they can be considered as most vulnerable in this group. Those who were pensioned off much earlier would have also defaulted earlier and, if they exist, would be more likely to be found in Sub-Sample A. In this group, at least, the older the current age of the respondents, the likelier they are to default in the short term.

Age would, theoretically, have a negative relationship since the older one gets, the higher one's salary is, thus improving one's ability to pay the mortgage. However, it is also true that, the older one gets, the bigger one's household becomes and the more likely one is to be retired, thus offsetting the extra income derived from the salary increases. Between the two, the latter seems to be dominant in this case as shown by the positive relationship between age and arrears. This is not surprising, considering the fact that large households are prevalent in the developing world. A check in the household size shows that the average for the three study areas are 5.4, 5.4 and 5.9 respectively for Siol Kanan, Batu Kawa and Istana Dua.

Much more significant, when discussing the contribution of age to the incidence of arrears, is the SHDC's policy of allocating houses. At the beginning of this chapter, it was pointed out that age is not a constraint to the SHDC whereas it is to other housing agencies and financial institutions involved in housing activities. Anyone who has successfully been offered a loan is given the maximum 25-year repayment period, whatever his or her age. Thus one who is on the verge of retiring can still get the maximum loan and the maximum repayment period. Thus, there is a possibility that some of those among the 60 households used in the model are pensioners. For

illustrative purposes, the percentages for the three areas of those over the age of 45 when offered these houses were 6, 13 and 11 respectively for Siol Kanan, Batu Kawa and Istana Dua. When the survey was carried out, out of the original sample size, 2 percent, 9 percent and 7 percent were already pensioners. Their presence in any calculation would contribute to the arrears as this group would be getting only half of their last drawn salary - drastically reducing their income and at the same time increasing their rent-income ratio.

The presence of CSCHG in this model, which is also positively linked with arrears, means that the more the household spends on doing changes to the house the more financial burden it has, and this in turn affects its ability to honour its mortgage commitments, at least in the short term. Such households may, if they can put their financial management in order, be able to sort the problem out over the long term. But for the short term, and as expected, those who made changes to their houses are more likely to default than those who did not, as borne out by the result of this regression.

As can be seen from the Table 6.30 the value of the adjusted R^2 is low, at 0.275, but is statistically significant at the 0.01 level. However, at the same significance level, only the regression coefficient for original rent-income ratio (RI), current income per capita (YPC1) are statistically significant, while the others are not. Nevertheless, these coefficients, for CSCHG, AGE1 and DURA, are statistically significant at the 0.15 level. The relationship derived from the model is,

$$\mathbf{ARRS} = 2.6589 + 3.955\mathbf{RI} - 0.0016\mathbf{YPC1} + 0.4159\mathbf{AGE1} + 0.19\mathbf{CSCHG} + 0.1435\mathbf{DURA}$$

6.3.3 Logistic Regression Analysis - Sub-Sample Istana Dua[10]

This regression is used for the purpose of classifying the household sample, in this case those from Istana Dua, into one of two populations, i.e., those with arrears and those without. It can also be used to decide which independent variables are predictive of arrears. The array of variables, both discrete and dummies, used in the multiple regression before this, can be used to predict whether or not a household will default in its mortgage repayments. This analysis can predict which independent variables best predict inability to pay. The equation for this regression takes the same form as the multiple linear regression and is as follows:

$$\ln(\text{odds}) = a + b_1X_1 + b_2X_2 + \ldots + b_pX_p$$

10 This sample group is made up of those from Istana Dua only.

where ln(odds), referred to as *logit* is the probability of defaulting.

As suggested earlier, only samples from Istana Dua are used, solely due to the fact that, as exhibited in the output of the multiple regression analysis above, it is not only a major contributor to the number of defaulters but also the amount of arrears for the three areas. Further, its age which is almost 12 years makes it a better sample for assessing the probability of becoming defaulters than the other two, both of which have only been completed within the last three years. For instance, those in the newer housing areas may default since they may have overstretched their financial capability because of other commitments which are usual around this period of moving into new houses. They may have used their savings or taken extra loans or used the money that might have been put aside for the instalments to renovate their houses, buy new furniture, or used to pay the deposit for the houses earlier on. This extra burden may or may not continue to exist after five years, but in normal cases loans taken for these purposes would have been settled within five years at the most[11]. For these reasons, it is felt that a study on the probability of becoming defaulters and the explanatory variables would produce a more reliable and valid results if carried out among those who have lived in their houses longer than this period. A stepwise regression was also used to select the most significant regressors to be used in this model, and the results of the logit equation is presented in Table 6.31 below.

Table 6.31 - Logit Regression Output for Sub-Sample Istana Dua

Variable	*Parameter Estimate*	*Pr>Chi-Square*	*Standardized Estimate*	*Odds Ratio*
INTERCEPT	0.380	0.491	.	1.462
YPC1	-0.004	0.043	-0.370	0.996
NTGROUP	1.521	0.008	0.416	4.575
No. of Observations	167			
Concordant	74.4%			
Discordant	24.8%			
Tied	0.8%			

Source: Field Work, February 1993.

The two regressor variables included in the model explain nearly two-thirds or 75 percent of information, both of which are statistically significant as shown by their P values of 0.043 (YPC1) and 0.008 (NTGroup). These results show that if a household has a high income per capita, it decreases the possibility of the same household falling into arrears, as indicated by the negative relationship. In contrast, belonging to the non-target group and being in the upper economic class will increase the possibility of defaulting. The identification of non-target group

11 Such loans are normally taken in the form of a personal loan and finance institutions usually give a maximum of five years for it to be settled.

(NTGroup) and current income per capita (YPC1) again confirms the initial presumption that they are most likely to cause incidence of arrears among house buyers, and supports the sixth and the seventh sub-hypotheses of this study. The estimated model for Istana Dua can be summarised as follows:

Defaulting = 0.38 - 0.004**YPC1** + 1.521**NTGroup**

All in all, the results of both the linear and logistic regression analyses above support the fourth main hypothesis of the study which is '*all beneficiaries of these low cost houses, irrespective of their income group, have affordability problems*'. All households from across the spectrum, target and non-target group, single and dual income households, experience affordability problems although the burden seem to fall heavily among the bottom deciles.

6.4 SUMMARY

This chapter has shown that the sizeable amount of subsidy injected by the state per unit of housing was found to be a function of various factors, of which land, regulations, materials and finance were the major contributors. It was also shown that the ceiling price for the houses was misleading as it was based on financial charges on the private market, while most of the borrowers took their loans from the SHDC at a cheaper rate. Thus the rent-income ratio of the target group for a 95 percent loan charged at 5 percent interest over a 25-year period is only 0.25, far below the government level of 0.33 based on the market rate. Looked from another angle, the maximum qualifying income levels of these households, were they to take SHDC loans, would only be MR534 per month compared to the official MR750 per month.

It was also found that, for every unit of housing, the state is going to lose at least 60 percent of its investment even at full cost recovery. In extreme cases, such as in Batu Kawa, where land was a serious problem, the state could easily lose as much as 80 percent of its investment in the form of subsidy. These findings, coupled with the fact that most of these houses have been mistargeted, not only question the need to pursue such approaches but also demand a more selective implementation like subsidising the targeted households rather than the houses as in this case. This 'wasteful' approach should therefore be reviewed and a more equitable approach pursued not only to ensure greater equity but also to improve efficiency. While the beneficiaries and the state have been shown, as widely believed, to benefit and lose respectively, the state agency itself has been shown to be a net gainer of all the programmes, which is due largely to the high amount of subsidy inputs made by the state.

The rent-income ratio is also found to be consistent with earlier works where the lowest income deciles have high ratios and these decrease as income increases. The average level seems to be acceptable, due to the non-target group factor, but as far as the target group is concerned the burden especially on the poorest three deciles is extremely high. The burden is especially high among single income households.

The price-income ratio too seems a bit on the high side, at least in comparison to established findings. While demand for low cost houses is healthy and strong, and tenurial security is not in the least a problem, the high price-income ratio suggests a very sluggish supply sector. What is clear is that the rent-income ratio, like the price-income ratio, displays the expected trend - high at the bottom income scale and lower at the top. It also shows that, over time, as the household income increases the ratio gradually decreases. The striking difference is in the changes at the lowest decile especially among single income households. Here, because the household depends on one bread winner, its income status will greatly affect the position of the household in the income spectrum. It is these changes in the income levels that have resulted in the increased ratios in the lowest decile group.

Although it has been established that both rent-income ratio and price-income ratio decrease over time, due to increases in income, households seem to find it difficult to keep up with mortgage repayments. Two reasons were shown to explain this inconsistency. The first is that, at the bottom end of the scale, instead of decreasing the rent-income ratios seem to increase and this applies to both households within the target group and those with single incomes. This is also a reflection of SHDC's policy that allocates houses to the older age groups, resulting in increased rent-income and price-income due to sudden change in household income usually due to retirement, decease and so on. The second reason is that some households are trapped in this situation due to the initial financial difficulties brought about by commitments taken at the initial stages of moving in. For instance, regression results from both Sub-Sample A and Sub-Sample B show that it is the original rent-income ratio (RI), and not the current rent-income ratio (RI1), that is the main determinant of arrears. Results from Sub-Sample B also show that the amount spent on changes to the houses by households could trigger this problem initially. Unless they can clear them soon, they will end up as those in Sub-Sample A. This proves that although most households have decreasing rent-income ratios, they still fall into arrears because of, (i) their high initial rent-income ratio, and (ii), the extra financial burden taken by these households at the time they moved in. These two factors have been crucial in affecting the buyers' ability to pay at the beginning and has led to the defaulters current predicament.

What is also clear from the above is that similar and different types of variables determine the incidence of arrears for the short and long term. For the two groups discussed above, both the current income per capita (YPC1) and original rent-income ratio (RI) are influential, although in opposite ways. These two, together with the other regressor from among the long term defaulters, i.e., income group (NTGROUP) are more significant, as these are the 'perpetual' causal variables. In other words, they are the best indicators to be examined in order to identify and predict the causes of arrears amongst government housing mortgagees.

Thus, it is proven here that the higher is the rent-income ratio, the higher the arrears are. It also confirms that, although other factors can play a significant influence in a household's affordability to acquire a house, the rent to income ratio has been shown to be one of the most dominant, as shown by the Prob > |T| value of the regression output, which is very significant even at the 0.001 level. What this shows is that the low income households who allocate a huge proportion of their incomes on housing, thus resulting in high rent-income ratios are most vulnerable. However, that current per capita income has also been identified as influential in determining who defaults suggest that the higher income group also suffers from the same problem, especially when the variable non-target group (NTGroup) was also identified as a causal factor. Even the the results of the logistic analysis suggests that the higher income group is as risky as low income group when it comes to defaulting.

CHAPTER SEVEN

CHAPTER SEVEN

SUMMARY AND IMPLICATIONS OF FINDINGS, RECOMMENDATIONS AND CONCLUSIONS

7.0 INTRODUCTION

This final chapter will bring together the discussions from the previous two chapters and recapitulate on their findings. The purpose is to primarily summarise firstly, the specific implications of these findings on the hypotheses of this study and secondly, their wider implications as regard the general policy and practice adopted by the housing agency concerned, and the state authority overseeing it. From these, recommendations will be put forward and future areas of research identified.

7.1 SUMMARY OF FINDINGS

As set out Chapter One, the main purpose of this study is to evaluate the performance of a state agency in the provision of low cost housing to the low income group. The agency in question is the Sarawak Housing and Development Commission (SHDC) and the evaluation is made against four indicators. These are *accessibility* of the target population to the low cost houses provided; the *habitability* of these houses assessed from the beneficiaries' satisfaction toward these houses, their prices and the monthly instalments; the *sustainability* of these programmes in terms of the amount of money invested and recouped; and finally the *affordability* of these beneficiaries (target and non-target population) in respect of their rent-income ratios, price-income ratios and incidence of arrears. Chapter One introduces the research problem by outlining in general the standard state's response to the urban housing problem by directly intervening in the housing market. Focus is then made on the failure of state intervention in the form of the provider based approach, being the strategy adopted by the agency and scrutinised in this study, and hints at the need to adopt a realistic approach where the strengths of the free market and state intervention are both exploited, but within the political economic context of the country concerned. The chapter then outlines the purpose, aims and objectives as well as the main hypotheses of the study. The general housing market together with theories and concepts related to state intervention in housing are expounded in Chapter Two. The chapter points out that such an approach has been justified by the endless mismatch between housing demand and housing

supply which generally discriminates against the low income. The problems associated with this approach is discussed focusing on the problems of housing allocation, subsidy, regulations and sustainability. Empirical evidence points to the failure of such an approach where, among others, the number of houses provided have been very limited and most of them have been misdirected, leading it to be badly discredited. Unfortunately, instead of coming up with a viable alternative, theorists have been encapsulated in the so-called self-help debate, a debate which is overwhelmed by ideological jargons, enriching theoretical knowledge but doing little to improve the supply of low cost houses on the ground. According to Niented and van der Linden (1985) this debate was just a confrontation between two different epistemologies which only succeeded in widening the gap between theory and practice. The chapter does not negate the importance that either side of the debate plays in housing practice, but instead affirms the needs of one upon the other, and vice versa. Thus, wholly in alliance with Marcussen (1990) the chapter advocated for a contextual approach but based on the enabling strategy proposed by the World Bank, the findings of which could be used to reformulate theoretical understanding of the housing problem in the developing world while at the same time helps narrow the gap between theory and practice.

Chapter Three explains the political relationship of the state of Sarawak within the federal framework of Malaysia. It shows the obstacles that it has to face in terms of competing for the national housing allocation which is already depleted due to the political philosophy of the nation, its urbanisation policy and general development goals. The poor performance of the *public housing sector, the increasing demand put upon this sector in terms of* 'more houses for less money' and the special land issues in Sarawak contribute to overall low cost housing provision in the state. However, it was also found that, contrary to popular assumptions, the agency has not had any problem when requesting financial allocations from the federal government. If problems exist, they are more the results of the agency's own poor performance owing mainly to technical and land issues. The chapter also gives a brief description of the agency studied, i.e., the Sarawak Housing and Development Commission. Chapter Four justifies and explains the research methodology of the study detailing the research hypotheses, the research strategy and the techniques of data collection and analysis.

The next two chapters form the core of the research. Chapter Five analyses the performance of the SHDC in relation to the first two main hypotheses of the study. It looks at the accessibility of the target group to its low cost houses, and the habitability of these houses from the satisfaction perception of these beneficiaries. It is shown by this chapter that the target group has not really

benefited. Among the main losers are the self-employed and those earning less than MR500 per month. The main beneficiaries are those with political backing, salaried households, government servants, joint income households, households in the lower middle income group and particular ethnic groups only. The causes of these outcomes were partly due to non-adherence of agreed policies (non-compliance with the MR750 maximum household income and 0.33 rent-income ratio rules as well as allowing maximum loan repayment periods irrespective of mortgagee's age) and partly caused by the land system in the state which forces the agency to depend heavily upon state land for its developmental projects. The chapter has also established that a great majority of the respondents are satisfied with the houses - high physical quality, low price and instalments. In cases where dissatisfaction is expressed, the reasons are mainly ascribed to two factors; one, poor environmental quality (Batu Kawa Estate due to the subsidence problem faced by the site) and two, poor housing (Istana Dua Estate due to poor quality and design and higher prices). Even then, it was also shown that very few of these dissatisfied beneficiaries are willing to move to a similar house elsewhere. Among the very few who affirmed their willingness to move, the monthly amount they are willing to pay for those houses are much lower than the amount they are currently paying. This confirms the high regard even the dissatisfied respondents have toward these houses.

Chapter Six analyses the replicability of these projects and the affordability of the beneficiaries. It is found that even under ideal construction situation the amount of subsidy per unit of housing is still high. Under normal circumstances, the bulk of the subsidy was in the form of costs for land, regulations and materials, in that order. The buyer is obviously the main beneficiary and it was shown that the benefit that the buyer enjoyed was twice the cost that he paid for the house. The SHDC was shown to be a net beneficiary as well since subsidy was actually borne by the State Government. This is hardly surprising as much of the costs incurred by the SHDC in the construction of these houses were actually subsidies provided by the state (low land premium, for example). For the two projects under scrutiny, only a third of the investment can be recovered in Siol Kanan with only a fifth in Batu Kawa. On top of this, the state has to also contend with the problem of poor recovery rate and it was shown that even after only three years the total outstanding arrears for these two areas amounted to at least 1 percent of the total loan given out, and this would undoubtedly increase with time as shown in the case of Istana Dua where, after a period of eight years, the amount of arrears was around 4 percent of the total loan.

Chapter Six also finds that the affordability level fixed by the government is slightly lower than the affordability level at selling price of the unit, and less than half the affordability level at

market price of the unit. This is only about a third of the affordability level at actual production cost. This generous level, assisted further by an overall decreasing rent-income ratio and price-income ratio, which in some cases have dropped by as much as 15 percent, have been shown to have little impact on the ability of many of the beneficiaries, most of whom do not belong to the target group, to service their monthly instalments. Since rent-income ratio was shown to be the main determinant of arrears among defaulting households, this failure can be attributed to either the specific increase of rent-income ratios among single income households and households at the bottom income deciles, or the general decrease in the average rent-income ratio which suggests that this decrease is insignificant and the levels are still high for the affected families due to other demanding financial commitments. It is also shown that households initially fall into arrears due to the extra financial responsibility that they take to carry out changes to the houses. This determinant will peter out as soon as the households begin to recover from moving in. It is also identified that, beyond this point and among habitual defaulters, different determinants come into play the most significant being rent-income ratio.

7.2 IMPLICATIONS OF THE FINDINGS

All the hypotheses that we have set out to test have been proven. Most of these findings concur with the findings of other studies, while some have broken into new areas or improved on work previously done by others[1]. We will now consolidate these findings within the context of these four hypotheses, and reflect on the implications of each.

7.2.1 Hypothesis One: Accessibility of the Target Population

The study finds that only about a quarter of the beneficiaries come from the target population proving the first working hypothesis that 'the low costs houses have benefited a greater proportion of households from outside the target group than from within'. It is also found that even among this handful of successful target population, most fall within the top third of the targeted income level. Figures show that only 10 percent of the target population who benefit belong to the bottom two thirds of the targeted income level. This proves the second working hypothesis which is 'the beneficiaries that fall within the target group are mainly those in the upper percentiles'. The third working hypothesis which was 'some beneficiaries have been allocated houses not based on eligibility criteria but because of political interference' has also

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1 For instance, disproving the widely held perception that the poor are not good at servicing their loans. Klak's (1992a) similar conclusion was limited to explanatory variable independence, while this study's finding is based on a more rigorous multi-variate analysis.

been proven. Around 15 percent of the beneficiaries were allocated these houses through political support and not through normal application procedures. The confirmation of these three working hypotheses prove the first hypothesis of the study which is '*the low cost housing units built by the SHDC in the urban area of Kuching have not benefited the identified target group*'.

These findings support our contention that the mode or type of intervention used by the agency has largely resulted in costly programmes which are of restricted impact. Thus the assumption and belief that the provider based approach in housing supply would increase the accessibility of the low income and increase home ownership among them is patently not the case. The reasons for the inequitable distribution of these houses was a result of a chaotic and loose implementation of policies within a rigid and archaic administrative arrangement. Most of these houses have been mistargeted due to a poor allocation system which also suffers from political interference as well as faulty affordability criteria. The later is caused by a confused policy implementation where the national MR750 per month eligibility criteria for a MR25,000 (price fixed in 1982) house is applied in the state for a MR32,000 house. The conscious desire to ensure that all beneficiaries can afford to repay the loans may be another factor why very few households from the target group are selected.

If efforts are required to overcome these problems, focus must be made on two areas of the allocation system. One, a fairer allocation system giving more weight to lower income households and without interference from the politicians must be put into place. Two, the allocation system must have an inbuilt mechanism to ensure that those within the target group are not missed. A corollary to the second implication is the need to reduce the cost of the houses so as to reflect the affordability of this target group. In this case, standards, materials and finance must be reviewed in relation to the affordability levels of the target population.

7.2.2 Hypothesis Two: Habitability of the Houses

The second main hypothesis that '*the high standards adopted for these houses meant that the houses are of high habitable quality*' has also been proven. The three working hypotheses formulated for this hypothesis were all confirmed where the majority of the respondents expressed satisfaction with the three indicators asked, namely the house itself, its price and the monthly instalment. Even in the poorly designed but more expensive units in Istana Dua, the proportion of satisfied respondents was reasonable. Although the proportion of dissatisfied respondents were higher than the other two, this was not reflected in the number wishing to move

out of the area thus further confirming their general acceptability of these houses. This is even further strengthened even by those who wanted to move to similar houses elsewhere who were only willing to pay either the same amount or lower than what they are currently paying. This only confirms that despite their expressed dissatisfaction there was actually no desperate need to move out thus further reflecting the habitability of these houses, although the influence of a rent-seeking behaviour (Krueger, 1974) should not be discounted. It is also found that, where changes to certain parts of the houses were carried out, the location of these changes did not reflect the owners' dissatisfaction with them. This means that where such dissatisfaction was expressed regarding a certain part of the house, it was not enough to require changes be done to it.

The satisfaction with the houses themselves support the view that houses supplied through the provider-based approach are of high quality due to the standards and regulations that have to be followed (Tipple, 1994). The satisfaction with the house prices indicate the value for money that the beneficiaries rightly feel about them as the actual cost of production and the market value of these houses far exceed the sales price. This indicate the high amount of subsidy that has been injected to realise these programmes. The satisfaction expressed with the monthly instalments indicate the equitable costs of finance that these households get, which of course is made possible by more subsidy. The hidden subsidy elements present in the cost of producing these houses and the loan provision will be examined in the fourth hypothesis. The implication of these highly habitable houses is closely tied to that identified with the implication of the first hypothesis, and that is, the programme will not be cost effective and efficient. It will be expensive to implement and benefit only a small group of people who happen to be, as proven by hypothesis one, the better off.

There is thus a need to evaluate appropriate standards to ensure realistics costs that would match the affordability of the target population. Further, a reduction of standards would in itself reduce the amount of subsidy needed and such savings could be used productively to construct more housing units. In other words, while enabling the target group to afford the houses, the lowering of standards to an acceptable level could also create the effect of broadening the impacts. The subsidy related to end userfinancing may, if the poorest of the population is to be helped, have to be maintained. However, rather than providing a blanket subsidy on interest rates, more flexible and equitable rates should be used reflective of the affordability (probably based on household income for low income families, and income per capita for medium income families) of the households concerned.

7.2.3 Hypothesis Three: Sustainability of the Projects

The study has found that the subsidies for two of the projects amounted to 60 percent (Siol Kanan) and 75 percent (Batu Kawa) compared to 62 percent among international sites and services schemes (Mayo and Gross, 1987)[2], thus proving the first working hypothesis that 'the actual costs of putting up these houses are more than double their sales prices'. It has also confirmed the second working hypothesis that 'the average arrears per household is nearly half its average monthly income'. This is true among households who have taken a mortgage in the last three years. Among households whose mortgages are older than these, the average is actually more than double the average income. Finally the third working hypothesis, that 'the amount of money due to be repaid, assuming a full recovery, is just a fraction of even the total costs of the project', is also found to be true. In this case, the amount recovered would range between a fifth (in exceptionally problematic areas as in Batu Kawa) and a third of the overall investment.[3] All in all, these three working hypotheses confirm hypothesis three which is *'the immense gap between the actual cost of producing the houses and their sales prices coupled with the poor rate of recovery makes the projects difficult to replicate'.*

It is shown here that, besides the high building standards identified in hypothesis two, the high subsidy input was also necessitated by land of poor development quality, building materials and low interest rates. The poor recovery rate even with this subsidy (low prices and interests) indicates the low affordability of these households, although most of them fall outside the target income group. The gap between the sales price and the production costs will make these projects inefficient and hard to replicate even on a small scale. It is the incidence of such high levels of subsidies that will entrench the problems of cost recovery, sustainability, equity and efficiency.

Solutions to these are pretty straight and simple. As we have pointed out with hypothesis two, lower but acceptable standards mean cheaper houses. This will reduce subsidies especially when the houses can be sold at resource costs and at the same time improve cost recovery and enable replicability on a large scale. However, if subsidies are justified, and they are in some instances,

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The agency has actually implemented a number of sites and services project with poor results, mainly mistargeting of sites. The schemes are for households earning less than MR600 per month and interest is charged at 5.5 per cent per annum for a 25 year period.

3 Using the selling price of a similar housing unit as a measure, the amount of subsidies for all the intermediate houses examined in the two areas (158 units in Siol Kanan and 255 units in Batu Kawa) are equivalent to approximately 260 units of similar houses in Siol Kanan and 915 units in Batu Kawa.

these should be acknowledged, identified, quantified, and projected in order to ensure maximum equity and efficiency, as well as optimum overall economic impact.

7.2.4 Hypothesis Four: Affordability of the Beneficiaries

The assumption that households would experience a decreasing rent-income ratio over time has been confirmed by this study. However, it has also found that, against the trend, households at the bottom income levels and households with single incomes are actually experiencing decreasing household income and thus increasing rent-income ratios (working hypothesis one). This indicates that affordability actually does not improve among these groups of beneficiaries. When it comes to arrears, the study finds that although the rent-income ratio is the main determinant of arrears among defaulting households (working hypothesis two), other factors also come into play as indicated by the identification of the variable "non-target group" as one of the determinants (working hypothesis three). Among this group, their higher income levels mean that the ratios are in fact low, and their presence among the defaulters point to the influence of other determinants beside high rent-income ratios. This is provided by working hypothesis three which is 'income per capita, and not household income, is more influential in determining whether a household defaults or not'. Taken together, these four working hypotheses confirm the fourth and final hypothesis which is *'all beneficiaries of these low cost houses, irrespective of their income group, have affordability problems'*. Klak's (1992a) work agrees with this finding although his findings was made on a bivariate analysis, whereas ours is based on the more rigorous multi-variate regression analysis.

The incidence of increasing rent-income ratios can be attributed to the SHDC's own allocation policy. Again, operating against the national fiscal guidelines, the agency has found it convenient to give loans to applicants of advanced age. We have established that at least 20 percent of the houses have been allocated to applicants over the age of 45. It is therefore not surprising these affected households experience a fall in income resulting in an increase in rent-income ratios, once the bread winners have retired at the compulsory age of 55. The advantage of this seemingly flexible policy is that it allowed this group, who would have been missed, to actually benefit although they may have to suffer the consequences in the longer term. The rent-income contribution to arrears is self explanatory and has been widely discussed elsewhere. In our particular case, as it affects mainly single income households and those in the bottom deciles, a decision has to be made to find them other alternatives which reflect their affordability levels. Again, ways must be found to reduce standards and subsidy elements, as well as to introduce

flexible interest rates, so as to enable this group to be properly sheltered at affordable costs. Against this, the incidence of higher income households among the defaulters can be explained by the importance of expenditure as opposed to income in assessing a households affordability to purchase a house. Obviously, other less salient factors can influence such incidences such as a 'government gift attitude' (Klak, 1992a) which obviously is not present in our case, dissatisfaction with the houses or rents, or maybe just sloppy borrowers. Nevertheless, the influence of total household expenditure has been clearly indicated by the identification of the two variables, non-target group and current income per capita, among the determinants of arrears.

In order to overcome the issues identified in the foregoing paragraph, we should look into two areas. One is concerning elderly applicants who obviously require housing but cannot afford to maintain long term expensive loans. For this group of people, alternatives should be formulated with three key points - affordable prices, small loans and lower interests. If subsidies are needed, this is one occasion where it can be justified. It must also be remembered that since housing is more than just mere shelter, pensioners may find their future more secure with a base from where they can operate income generating activities if they need to. Two, both low income households with high rent-income ratios and medium income households with low income per capita have problems with affordability. For them, a progressive or graduated rate of interest may be relevant, depending on individual circumstances. This variable interest rate may even be applicable to older applicants where progressive rates be calculated and applied to fit in with their remaining productive years.

In many ways, the findings of the study corroborate those of previous studies on state provision of housing, few of which were conducted in this part of the developing world. This study has not only helped to fill this gap but also enables comparison be made with similar studies made elsewhere. Apart from that, the study is also important in four other respects;

i) it has empirically confirmed the significance played by income per capita in assessing a household's affordability to pay, a fact which has so far been assumed especially with regard to housing;

ii) it has applied a multivariate analysis in exacting the main determinants of arrears among defaulting households, an analysis so far limited to bivariate analysis;

iii) it has employed actual government mortgage data for its analysis, of which very few incidences exist, certainly none in this part of the world; and

iv) it has actually quantified the amount of subsidy injected in state housing and identified the actual beneficiaries of these subsidies.

What is also significant is that some of the problems identified are, as we have suspected earlier, problems which do not necessarily require a total overhaul of the system or one which stakes one ideological position against another. Indeed the findings that we identified above are a reflection of the problems that the World Bank (1993) has identified for Peninsular Malaysia such as rigid and inflexible housing supply, escalating land and house prices, limited housing supply, exclusion of the poor, government intervention with subsidies, regulatory and price controls, all of which ultimately created a distorted housing market. What is needed is, in the words of Rakodi and Devas (1992: 270), a new realism which

> *'implies the need to adopt more appropriate and affordable standards, and to intervene more selectively. Over ambitious attempts to control not only lead to frustration and failure but also encourage corruption, as people seek ways around controls. The benefits, such as they are, of such misdirected intervention are likely to accrue to the privileged'*

This, in a nutshell is what the World Bank's enabling approach is all about, an approach based on the premise that (a) it is the responsiveness of private markets which determine housing conditions, and (b) public actions can greatly affect this responsiveness, for good or ill (Malpezzi, 1994). It must be stressed again that this approach does not suggest that government intervention be scrapped altogether; indeed, as Malpezzi (1988, 1990) and the World Bank (1989, 1993) have on numerous occasions pointed out, regulations may need to be strengthened and reinforced.

7.3 THE SHDC AND ENABLING STRATEGY

The foregoing overview of the findings cannot but suggest that the approach adopted by the Sarawak Housing and Development Commission is morally right but weak in application. However, as we have seen, no approach is free from the drawbacks that we have identified, for example, even the laudable sites and services approach which has to be found wanting: failure to reach the target population, slow rate of completion, ownership falling into the hands of the middle and high income groups (Peattie, 1982), very high subsidies, understating costs of acquiring public land, and understating interest rates of payment (Mayo and Gross, 1987). These echo the very failures that we have identified in our study in relation to the provision of complete houses, attesting to the need not to simply exchange one approach with another, but to sort the underlying causes for these weaknesses which can be, in the words of the UNCHS, 'summed up as insufficient coverage, affordability by beneficiaries, lack of replicability' (1991: foreword).

What we are suggesting here is that the success or failure of a given housing programme does not depend on the mode of production, but by the strength of the policies in place. Thus the same housing approach will perform with a varying degree of success in different countries, and likewise one approach may perform less well than another in the same situation. In other words, the wholesale transferring of apparently successful methods from one country to another is not the answer to housing ills, although certain characteristics of good housing practice may cross national boundaries. Thus, one cannot explain the housing problems of the developing world with theories formulated in the developed world, nor can one criticises the capitalist market in Bangladesh equally with that in Brazil (Marcussen, 1990).

We have shown that the Malaysian housing market is no different from any other developing country in that it too has a three tier housing market, the high income tier which is well financed by the private sector; a middle income tier made up mainly of civil servants and financed by state subsidies; and the bottom tier made up mainly of low income households and excluded from the formal financial market (Renaud, 1991). There is definitely willingness of the state to intervene, judging from the amount of money allocated toward this cause, but the willingness and the commitment is certainly not up to the mark. There is a multitude of housing, employment and economic generating policies but most are handled on a sectoral basis without relating one against the other. This is paramount especially with housing policy, as its success hinges on other policies as affordability of a household is improved if it has regular incomes and a steady job.

The multiplier effects, both backward and forward, of housing investment should not be underestimated. Grimes (1976) finds that the multiplier effect from housing construction is around two while Klaassen *et al* (1987) argue that it is also inversely related to the cost of the houses, provided that the low cost houses are constructed of local materials. Backward multiplier effects of low cost housing production also contribute to national development (Woodfield, 1989) especially in the building materials industry (Moavenzadeh, 1987) involved in the housing sector (Klaassen *et al*, 1987).

On the more mundane level, it is not so much land and finance which is the curse of the Malaysian low housing problem, but the bureaucrats' obsession with standards. It has been shown again and again that, the government has willingly offered state land for the construction of low cost housing at least in Peninsular Malaysia. In Sarawak, the state has been calling for the people to start cooperatives so that land could be allocated to them for house building, apart from

selling land at a premium to the SHDC. Civil servants have access to subsidised government loans, while non-civil servants have access to one of the most developed financial system of the developing countries offering a secondary mortgage market, graduated and progressive interests and so on. This is not to say, of course, that land supply and financial access, especially for the very low income and self employed, cannot be further improved, of course they do and can. However, when it comes to standards, no one is willing to budge such as in the case of the SLCH programme, when new reduced standards used by developers were checked against older standards by authorities processing the plans (Malpezzi, 1991)

The problem of housing should also be tackled on a wider front although the target is to alleviate the urban low cost housing problem. Two areas can readily be identified. The first is to also encourage the production of medium cost houses on two grounds, one, to enable filtering and, two, to provide alternatives for middle income households who now cannot afford high cost houses and have to compete for low cost houses. The second is actively to work with other agencies, especially those involved with rural land development in the provision of rural shelter. The provision of medium cost houses, while helping to relieve demand on low cost houses, has also been identified as most likely to generate the longest chains of moves, even compared to high cost houses, amongst low income households (Ferchiou, 1982). In order for this to succeed, however, upgrading of existing low quality housing stock must be promoted without which the chains would be terminated. Upgrading schemes and provision of medium cost houses are complementary housing policies and implemented in unison they can reach both low and middle income households. Thus financial policies should be geared to make readily available loans to households for old dwellings too.

The housing policy should thus be formulated with the long term interest of the country and the homeless beyond narrow parochial self interests of those associated with housing production. It should aim to stimulate housing production, particularly the low and medium cost housing, while at the same time focus on the upgrading of present but poor quality housing stock, in order to achieve greater efficiency and equity. Most of all, housing should not be seen as an end in itself - a product, but as a process of production that can act as a catalyst for the broader economic development. In order to do this, capital projects should focus only on the production of low cost houses with the private sector assisted in producing medium cost houses. The corollary to all this is the need to set more realistic building standards which will help to cut subsidies and, with the money released from this, to increase low cost units. Subsidies should be continued where they can be identified, quantified and their effect projected; but only when they are meant

to increase housing productivity and redistribute incomes and are channelled direct to the recipients.

What we have suggested above are in the same spirit as the enabling strategy as far as the objectives to promote housing production through the strengthening of current instruments are concerned. As we have pointed out very early on in this study, this approach would soon be criticised and the most cogent criticism has come from Baken and van der Linden (1993). Central to their criticism is the defeatist belief that the problems related with land and the housing markets in the developing world cannot be solved because these are ubiquituous problems. They also suggest that, since these markets are inefficient, market based solutions are meaningless, and any efficiency achieved in such markets are compromised by equity. Other issues have also been raised in their work such as those relating to the inefficiency of the formal market and the promise held by the informal market in meeting the demand for low cost housing. It is not, however, our intention here to engage in a debate with their criticisms as Malpezzi (1994) has addressed the points that they raised competently in his response.

It is also not our intention to go over the strategy here as it is well documented and discussed elsewhere, except to outline the seven policy instruments identified by the World Bank (1993) as central to the enabling policy, and these are:

a) develop property rights;

b) develop mortgage finance, especially greater access to capital by the poor;

c) rationalize subsidies, i.e., appropriate and affordable scale, well targeted, measurable, transparent and avoid distorting the housing markets;

d) provide infrastructure for residential land development, proper coordination of agencies;

e) regulate land and housing development, balance cost and benefit of regulation, remove regulations that hinder housing supply;

f) organize building industry and competition, encourage local materials, reduce trade barriers that apply to housing inputs;

g) develop institutional framework for managing the housing sector.

Although the findings have obviously faulted state intervention for the poor supply of low cost housing in the state, we are not calling for anything as drastic as its absolute withdrawal from the housing market, but to suggest ways on how the weaknesses can be plugged and the

opportunities be exploited. This would still entail state involvement but in the form of a new arrangement involving financial, institutional, human and physical resources co-ordination by public action (UNCHS, 1991); after all, the 'form of state intervention into housing or other economic sectors is the key determinant of the outcome on the ground' (Klak, 1990: 585).

7.4 FUTURE HOUSING POLICY: A PRACTICAL STRATEGY

Judging from the implications outlined in section 7.2, some of these instruments are certainly relevant especially those that could encourage a responsive supply side of the housing market. The housing policy recommendations suggested in the following sub-sections for the state as a whole, and the SHDC in particular, will be a set of responses tailored to findings identified, i.e., those directly related to the issues of *accessibility, habitability, sustainability and affordability.* They will, therefore, be selective and focusing on either new policy instruments or current instruments that require strengthening or change. For instance, fiscal instrument like secondary mortgage may not be mentioned, *not because it is not important but either because it is already in* place and requires no further action or it is not present but is considered insignificant to our purpose.

7.4.1 Accessibility Issues

Findings from the study indicate that affordability problems are not restricted to the low income households only but extend to the middle income households especially those with large families who consequently have low income per capita. This situation is manifested in another finding where arrears occur across all income groups, thus supporting a similar conclusion made by Klak (1992b). The implication of these two findings is that the number of households that need help with affordable housing are greater than previously thought and if these households are to be assisted the definition of target households should be widened from the more restricted 'household income' to the more realistic 'income per capita'. This enlargement of the pool of target households can bring about either an unwelcome effect on the SHDC by putting more pressure on it or spur it to be more imaginative in its approach to solve the problem. Although defaulters have been found to be scattered throughout the income groups, there is no reason to believe that the low income households, and this includes those with low income per capita households, are bad borrowers (see for example Sumka, 1987), a belief which we and Klak

(1992a, 1992b) have disproved. Indeed, indications show that they are better at repaying their loans than big loan takers.[4]

We therefore recommend that the SHDC should incorporate three variables as part of the selection criteria for assessing eligibility and affordability amongst applicants, and to ensure equity and cost recovery. Two have to be assessed in toto and these are rent-income and price income ratios (Landeau, 1987; 1991) and the third is household income per capita. While the first two will weed out the risky households among low income households the third will take care of the ineligible households in the higher income brackets. We recommend that

7.4.1.a The eligibility criteria should be based on the household's income per capita as well as its rent-income and price-income ratios.

We suggest the adoption of Landeau' suggested ratios, i.e., maximum rent-income ratio of 0.4 and price-income ratio of 5; while the income per capita shall be decided by the state governmnent itself. The advantage of applying this criteria is that it links a household's affordability to both its income level (rent-income and price-income ratios) and its expenditure needs (income per capita).

The immediate effect of this is that many households will fail to meet this qualification especially those in the bottom deciles who, as we have shown and contrary to expectation, are experiencing a rising rent-income ratio. Many of these households either have retired heads or have only one income. We suggest that assistance should be continued to these needy households to provide them with affordable alternatives which involve lower costs and smaller loan sizes. We therefore recommend that

7.4.1.b A household which fails to meet the first recommendation, or has an elderly head, must be provided with alternatives in the form of a support-based housing strategy with related loan facilities.

The identification of self-employed households as among the many losers suggest a need for ways to assist them. The reason why most of them failed to get these houses is they have no access to the formal housing finance market. This is an area where the SHDC, with its social goals, can come in to play a beneficial role; it must stop giving loans to those with access to the finance market (civil servants and salaried applicants) and redirect these loans to those without

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4 Sickander (1986) finds that the Malaysian Building Society has had no need to make provisions for bad and doubtful debts under its low cost housing loan scheme, although it estimates that about 20 percent of all its borrowers are in arrears of five months or more.

such access (self employed households and very low income households). Our recommendation related to this point is

7.4.1.c The SHDC should provide housing loans, charged at market rates, only to those households that have no access to the formal financial market.

While the policy of allocating houses to those born near or around the project area is exemplary, at least to these beneficiaries, the wider effects may not be desirable and may even be self-defeating. Such a practice may benefit a less eligible local household and not a more deserving migrant household, which obviously has serious long term ramifications on the overall shelter policy. It must be realised that the nuclear family tradition is still strong in the state and a failed local applicant causes less disruption on his household and his way of life. The SHDC should allow some leeway in this process, probably by using a quota system, which gives the migrant low income household an equal chance in the housing allocation while at the same time giving room to the sensitivities of the local inhabitants. In this we recommend that

7.4.1.d A certain proportion of the houses must be reserved for migrant households.

It has also been found that political interference exists although it may not be as widespread as initially believed (see also Kwaku, 1977). However, although no correlation exists in our study between the defaulters and politically backed beneficiaries[5], the SHDC should still exert its independence from such interference and allow the proper allocation process to run. Our suggestion that a proportion of the houses be allocated to migrant low income households should help to reduce political interference in the allocation system as they are electorally insignificant as far as the local politicians are concerned. Even so, built-in safeguards have to be adopted to ensure fair and open allocation, and we therefore recommend that

7.4.1.e A ballot system should be adopted to select applicants shortlisted based solely on eligibility criteria.

7.4.2 Habitability Issues

It has been clearly established that, as in other developing countries, the total approach adopted by the SHDC suffers from heavy subisidies due to its emphasis on formal standards. Compared to land and finance, standards seem to be the least pliable of the three; it is the only one which has not been adapted, modified or changed in ways the other two have. It must be accepted by all that costs rise with standards, and that standards should not be treated as any more than a type of

5 Every household is up to date with their instalments.

measurement of a given situation which is culturally based and should also relate to available resources of the target group. Bureaucrats and professionals must discard their pre-conceived middle-class images and pseudo-western housing and environmental standards which are clearly inoperational, i.e., outside the capacity of the low income households to afford. The required subsidies (and income levels) of housing beneficiaries are, according to Mayo and Gross (1987) highly sensitive to the level of housing standards. Struyk (1988), too, has identified standards as the most readily available of the three factors that can reduce subsidies and ultimately improve affordability, while Malpezzi (1994) has indicated that of all qualitative policies, appropriate standards could achieve higher efficiency and equity than other policies (see Figure 7.1).

Figure 7.1 - Stylized[6] View of Efficiency and Equity of Some Urban Policies

EQUITABLE Targeted Housing Allowance INEFFICIENT	Upgrading Appropriate Physical Standards Sites & Services Decentralisation EFFICIENT
Industrial Location Restrictions High Cost Public Housing Negative Interest Rates Excessive Land Regulation Razing Slum INEQUITABLE	Poll Tax

Source: Malpezzi (1994:9)

The need to revise standards is therefore urgent if any difference is to be made in the provision of low income housing in the state. Current standards and procedures are based more upon ideals than realities, although we submit and sympathise with those who want to retain them in order not to create officially endorsed slums. Unfortunately, it is this stubborness with authorised standards that is pushing the low income households to live in unofficial slums due to their inability to conform. The least that we could do, if we cannot completely revise the standards, is

6 Ranking and positioning of policies is weak and subject to change, but generally defensible.

selectively to relax the requirements, for instance on density and floor area ratios. Choosing the right standards will thus enable large scale replicability of the programmes.

The adoption of planning standards and building bye-laws is in itself very commendable. But to adopt the present level of standards for cheap low-cost housing does not make sense as these standards would push the costs of the houses up. Furthermore, for these low income earners, standards are not a priority as they are more concerned with having shelter, in whatever forms and standards, for their households. While we are concerned with the health and security standards of their shelter environment, we must also be realistic enough to accept the fact that we will never be able to shelter them at all at the present standards and regulations.

In Sarawak, standards are still tied to the 8 units per acre density which gives allowances for the regulated setbacks of 6 metre frontage, 9 metre rear and 4.5 metre side, all based on the needs for daylighting, ventilation and fire breaks, plus 12 metre for road reserve. On top of this, the roads have to be sealed for a minimum width of 4.3 metres and the drains constructed of concrete if the project is to be maintained by the Local Authority. These specifications for roads and drainage within low-cost housing areas are the same as those in medium and high costs housing projects. The state should look into this seriously as such high infrastructure standards do not correspond with the loads expected on these roads. The authorities can, if necessary, apply weight restriction on vehicles using these roads which, after all, are residential roads. Such high standards contribute substantially to the high costs of infrastructure provisions in low-cost housing schemes. Related to this, we recommend the following:

7.4.2.a Planning standards and building bye-laws especially those pertaining to low cost housing must be reduced.

7.4.2.b The state should instead adopt a blanket standard (planning guidelines) which would greatly assist housing developers to know what can and what cannot be accepted.

7.4.2.c The state should apply appropriate roads and drainage standards in areas demarcated for low cost housing.

It was also shown by the study that, in the state, on average it would between 2 to 5 years for an application to be approved, i.e., from the submission of the layout plan to the approval of the draft plan. This period has to be drastically shortened if developers are to be encouraged to go

into low cost housing development. Even if they are willing to be involved, the length of time needed for the process will cause prices to escalate. We recommend that

7.4.2.d A one-stop agency which has long been in practise in Peninsular Malaysia must be set up in the state.

Closely linked to the above, and as another effort to reduce costs and time, it is also recommended that

7.4.2.e Standard building plans, which can be reviewed every three to five years to ensure flexibility with changing demands, be adopted for low cost housing development in the state.

Present low cost houses are produced conventionally and mainly in the formal sector. Materials used in this approach and sector are usually based on international prices causing the house prices to be expensive. On top of this, highly skilled labour is needed to implement this method which again adds on to the costs of the end product. The state should look at providing houses unconventionally and also in the informal sector. This probably calls the state to act as a facilitator by training and encouraging locals to produce building materials. Such an approach would (a) provide employment, (b) increases cheap local building materials, (c) encourages house building in the informal sector, (d) be in line with GSS on Agenda 21 which Malaysia endorsed, and finally (e) indirectly and, more importantly, cheaply increases the housing stock in the state. We recommend that

7.4.2.f The SHDC should act as a facilitator to encourage the production of low cost houses through unconventional means and in the private sector.

7.4.3 Sustainability Issues

Much of the factors identified in the findings as contributing to the problems discussed in the earlier section and this section are similar. As such, this section will not repeat what has been covered earlier except to focus on ways to reduce costs and subsidies, and consequently allow sustainability. Apart from the standards discussed earlier, one other factor that has been identified in this study as a major contributor to the problem of sustainability is land. SHDC has been shown to overtly dependent on poor state land which can be very costly to prepare. It has been shown by many as the most influential single factor in causing urban housing problem. As McAuslan (1985:13) posits 'Land - its use, abuse, control and ownership - is the central problem of the city'. It is not enough, however, to simply introduce and implement ways to free land into the urban housing market without specifying the rationale behind them. As one of the inputs of

the housing market, the many demands made upon its limited supply requires that it be used to its absolute efficiency and at the same time achieve utmost equity. In Asian cities, the problem of land is associated with two issues, namely; land tenure and land supply (Sazanami *et al,* 1992). In comparison to other developing countries, Malaysia in general and Sarawak in particular is lucky in that land is still plentiful albeit most of it is not in strategic locations. This, plus the willingness of the state to provide it cheaply for housing development, cease to make it a major causal factor of the housing problem except, of course, in urban areas where the problem is fairly critical especially when large contiguous sites are needed.

The problem with land tenure can be eased by establishing clear land ownership and at the same time provide tenure security especially in illegal settlements. As such, property rights do not pose obstacles to the functioning of the Malaysian urban housing market in general, and Sarawak in particular as such a system exists and land ownership is clearly demarcated. It is the concentration of mixed zone land in urban centres and the disproportionate proportion of non-native population to its total area perpetually inflate the price of urban land. This has, as some observers (for instance, Baken and van der Linden (1993)) believe, led to speculation which then drives the price further up, although Malpezzi (1994) believes otherwise, that it is the high price of land that drives speculation. Nevertheless, in a distinctive situation like Sarawak, where the demand for limited urban land is further pressed by the limited mixed zone category, ways have to be found to ensure a steady supply of urban land for development. Since land rights are well established, we recommend that

7.4.3.a Procedures for land transfer and registration should be simplified as this could make a difference to how the market supply responds to high demand.

7.4.3.b A progressive 'undevelopment tax' on land left idle after a six year period, and expropriation on land left idle after ten years.

Since it can take as long as five years for a planning application be approved in the state, the extra year will give the land owner a breathing space in case of unforeseen circumstances. Sarawak, being a constituent part of an official Islamic country, should seriously consider this often neglected requirement of Islam, where resources left unproductive for a full year should be subjected to tax (which is fixed at only 2.5 percent), so as to encourage its profitable use and its multiplier effects. The second suggestion, i.e., expropriation of idle land, may sound drastic but nevertheless is not a novel idea as it has been suggested by no less than the U.N. (1980) itself.

On the part of the agency itself, it should not simply sit on its hands and wait for state land. State land, it must be realised, is land which has not been claimed either because it is of poor quality or is located in non-strategic location. Either way, the costs of preparing the land for development would be tremendously high, in the first case to prepare the land (as we have seen in the case of Batu Kawa) and in the second the costs due to peripheral development, i.e., either to provide access to it or development necessitated by the characteristics of adjacent land. The high costs incurred in purchasing good private land can actually be compensated by the lower cost of earthworks and infrastructure provision, better marketability (proximity to public facilities, for instance) and the higher prices that the houses can demand on the market. It is recommended that

7.4.3.c The SHDC should compete for good quality land on the private market and not simply depend on poor quality and badly located state land.

Past experience shows that the federal government is more sympathetic and co-operative when budget application is made based on project proposals made for land already owned, and not land that is still in the process of being acquired. At the moment, land acquisition is made on a project to project basis which, more often than not, gives an impression of an agency devoid of any concrete and long term plan. We recommend that

7.4.3.c The SHDC should start creating a land bank, preferably made up of urban land which is free from development pressures in order to keep the costs down and to give ample time for long-term planning.

It has also been identified in section 7.4.1 that the standards applied to low cost housing schemes are very high. One of the ways to lower cost is to increase density, and thus we recommend

7.4.3.c The reduction of setback requirements which will increase buildable (and saleable) land and reducing maintenance cost due to less road surfaces.

7.4.3.d The density for low cost housing schemes be increased but within acceptable design layouts that exploit opportunities offered by planning gains.

Physical layout plans, especially those involving low cost housing have far too long been drab and unimaginative. The principles of planning gains, increased land values brought about by development, should be seriously considered in preparing a layout in order to use them to subsidise the cost of plots for low-cost housing. It is also recommended that

7.4.3.e Mixed land-use, as a mode of cross-subsidy, should be widely used to help lower costs of low cost houses.

In the state, the SHDC has used this cross subsidy from high to low cost houses extensively as have housing developers in Peninsular Malaysia, who have to provide at least a third of their units as low cost. Such a proven strategy should be extended to the private sector in the state as it is practised in the Peninsular and should allow commercial plots to cross subsidise residential development.

One other reason for the high costs of low cost housing is wastage of building materials. House design should be based on the size of materials, where possible, so as to reduce wastage which will translate itself into less construction time and less labour costs, which in turn will translate into cheaper houses. Thus, we recommend that

7.4.3.f House design must take into account the size of materials incorporating the concept of modular co-ordination.

It has also been shown that the majority of the mortgagees have access to other sources of subsidised housing loans. We endorse the recommendation made in section 7.4.1 (Recommendation 7.4.1.c). A related point is the problem of arrears and cost recovery, and outstanding arrears have always been sore points to the SHDC in practically all its projects. Although its enforcement section does take defaulters to court, except in some cases where political interference has led bad debts to be simply written off, matters have, more often than not, been left too far before any action is taken. We recommend that

7.4.3.g For current defaulters where legal action have not been taken, a three month notice be served for all arrears to be settled or face legal action.

7.4.3.h For future defaulters, a three month notice be served for those who are at least four payments in arrears for court action to be taken.

It is of utmost importance that the SHDC acts, and is seen to act, positively and decisively if it is to succeed in its ventures. Any lax enforcement on any defaulter would only send the wrong kind of message to other mortgagees, and this has to be clearly understood by those in the SHDC.

7.4.4 Affordability Issues

Some of the relevant factors related to the affordability issues have already been discussed in the previous sections, particularly those pertaining to the eligibility and affordability criteria, as well

as loan provision, in section 7.4.1 and the lowering of standards in section 7.4.2. This section will look particularly into two areas which have not been dealt with, and which directly affect buyers' demand for housing, i.e., differing pattern of housing expenditure and high interest rates.

Malaysian society is well served by a multitude of commercial institutions, giving ample choices and competition in the financial market. The federal government has introduced many measures[7] but more efforts are necessary especially from the state government and the agency itself, particularly when none of these institutions can be said to serve the low income population as all pursue conventional banking practice which excludes the poor in their operation (for instance, see Klak, 1992b). The heavy concentration of medium income borrowers in their portfolios, even among SHDC's mortgagees, are due to the requirement for, among other things, proof of steady income, clear land titles (for registration of mortgage), of durable materials (to satisfy standards and meet collateral requirement), approved architectural plans and the rule of thumb affordability level, which we have shown to be questionable as it can lead to missing the intended beneficiaries (Malpezzi and Mayo, 1987: 712), unless it is used in conjunction with price-income ratio (Landeau, 1987; 1991). While salaried low income households have access to the subsidised government loans, we have found that those who are self employed (and with only one household income) have none at all. There is thus a need for an institution that can fulfil this need. Our suggestion will therefore relate to two areas; one, to improve the present access among low income salaried householders to the formal financial market, and two, to create financial access to those who are presently left out on the periphery of the system. In this respect, we restate the need for recommendation 7.4.1.c, i.e., *The SHDC should provide housing loans, charged at market rates, only to those households that have little or no access to the formal financial market.*

We have confirmed the fallacy of using the 'rule of thumb' proposition which not only leads to 'the need for massive subsidies if low income households are to be housed like other households' (Lee, 1985), but does not really indicate the actual proportion of income the target group would put aside for housing consumption. The study's findings that households in the bottom two deciles have rent-income ratios exceeding the limit adopted by the agency, as well as experiencing increasing ratios over time, suggests, (a) the impossibility of predicting housing costs, and (b) the wide variation of household's propensity to consume housing, with owners willing to spend more than renters (Bamberger, 1980; Landeau, 1991). Even low income

7 For instance, the requirement that banks and financial institutions reserve a proportion of their resources to finance housing development, control of interest rates for loans below MR100,000, and release of EPF contribution for house purchase.

households are willing to pay, and in some cases are better at repaying their loans than bigger loan takers (Bamberger, 1980; Sickander, 1986). Furthermore, we have also shown the role of both rent-income ratio and income per capita in determining arrears and the probability of a household to default in its mortgage payment. In association with recommendation 7.4.1.a, we further recommend that

> *7.4.4.a The SHDC should increase the rent-income ratio level from 0.33 to 0.4, and use this in conjunction with a price-income ratio of 5.0, as a guide to assess a household's affordability level.*

Against these records, financial institutions should have little fear in providing loans to salaried low income households and should in fact make the system more flexible so as to widen the eligibility net by redefining the affordability criteria, as we have just suggested, as well as to apply differential interest rates to ensure that subsidy is not mistargeted. The first entails the addition of income per capita as an extra measure to assess a households eligibility for a low cost housing loan (see recommendation 7.4.1.a), while the second, based on our findings that the majority of households experience decreasing rent-income ratios, involves two specific actions. These are (a) extending the repayment period, say, from 25 to 30 years, and (b) providing a graduated repayment scheme; both of which could be combined with a fixed grace period before repayment starts. The effect of the first proposal, however, is marginal but would be fairly significant if it is combined with the second. We recommend that

> *7.4.4.b The SHDC should adopt an upward sliding loan repayment scheme with stratified rates of interest to allow cross-subsidisation of interest in order to help the very poor.*

Variable interest will enable cross-subsidy and also discourage higher income households to compete with low income households for low cost houses. The only problem with this scheme is that the households must be guaranteed of drawing the expected income increase used in the repayment calculations. One possible way to overcome this is to instil some element of 'target saving' where such savings be deposited in the high yielding ASB scheme under the mortgagees name but the certificate retained by the SHDC.

Finally, greater freedom should be given to EPF[8] contributors who are allowed to withdraw a certain proportion of their savings for the purpose of house purchase[9] once in their lifetime, this

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8 Employees Provident Fund, a compulsory saving scheme similar to Singapore's Central Provident Fund.

is certainly not enough and full withdrawal should be allowed to a household if it is meant for low cost house purchase or to build their own house. The situation is incredible as the contributors are getting less interest on their savings compared to the level of interest they have to pay on financial loans from the financial institutions. It is recommended that

7.4.4.c Low income households should be allowed a higher proportion of withdrawal since investment in housing is as good a security for old age as is EPF contribution.

7.4.5 Wider Issues

The recommendations that we have outlined above are direct responses to the findings associated with the hypotheses that we have set out to prove. The discovery of other findings are, obviously, inescapable in a study like this and in this section we will respond and make recommendations to those, particularly ones which have direct implications on low cost housing provision by the SHDC. We will look at these under five separate issues, which are, (a) subsidies, (b) deposit taking, (c) strategic planning, (d) project implementation, and (e) status of the Ministry.

7.4.5.a Subsidies

One of the most serious flaws that this study has found is the high level of subsidies which does not permit large scale replication of such projects. This, interestingly is the same conclusion reached by Mayo and Gross (1987) when evaluating sites and services programmes, thus indicating that it is not so much the approach of delivery which determines policy outcomes but policy instruments themselves; in this case high standards and the wrong affordability measures used, especially those which are irrelevant and impractical to the context they are meant to serve. Subsidies for two of the projects amounted to 60 percent (Siol Kanan) and 75 percent (Batu Kawa) compared to 62 percent among sites and services schemes (Mayo and Gross, 1987)[10]. The incidence of such high levels of subsidies only entrenched the problems of cost recovery, sustainability, equity and efficiency. Solutions to these are pretty straight and simple; lower but acceptable standards mean cheaper houses which will reduce subisidies especially when the houses are sold at resource costs, and allow full cost recovery. Recovery of costs is important as

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9 For example, the government could intervene directly by instructing institutions, particular the Post Office and the EPF, to allocate a certain percentage of their funds to finance shelter provision.

10 The agency has actually implemented a number of sites and services project with poor results, mainly mistargeting of sites. The schemes are for households earning less than MR600 per month and interest is charged at 5.5 per cent per annum for a 25 year period.

it is a prerequisite to ensure that the projects can be sustained and replicated (Cohen, 1983). This, however, can be achievable only if costs could be reduced to the affordability levels of low income households as this would reduce subsidy levels. Our recommendations regarding these issues have been made in section 7.4.2.

It is, however, assumed that subsidies will form a permanent feature in the activities of the Sarawak Housing and Development Commission, since we feel that it is justified in some instances such as to provide help to the poorest income groups without which they are unable to compete for houses and the creation of jobs, especially if the subsidy is directed to the rural areas (Strassmann, 1976). In line with the findings of Malpezzi *et al* (1985) and Mayo and Gross (1987) but contradicting those of Shefer (1990), we have found that the low income household spends a higher fraction of their income on housing which in business sense make them risky borrowers if judged solely on their rent-income ratios. The indirect effects of such targeting of subsidies would also help support the basic functioning of the housing market and serve the needs of a much wider group of people (Buckley and Mayo, 1989: 43). Nevertheless, in order to allow considerable replication of projects, the amount of such subsidies will have to be reduced by adequately acknowledging, identifying and quantifying them. It is also important to project their effectiveness in order to ensure maximum equity and efficiency as well as optimum overall economic impact. We, therefore, suggest that

7.4.5.1 The state should continue providing housing subsidies, but only directly to the very poor households.

7.4.5.b Deposit Taking

The proportion of the population that we have mentioned above will also be denied access to finance and thus require different forms of housing finance to assist them which, because of their economic status and affordability level, demands affordable shelter at minimum costs. Their lack of access to the formal finance market and their high rate of saving levels (it is found that 70 percent of the beneficiaries have savings and used them to pay their down payment) indicate an opportunity waiting to be exploited: the need is for a body to act as a mediator and allocator of resources. Various ways have been suggested to encourage savings, and in this case they are clearly irrelevant other than to introduce the concept of savings for housing, or simply 'target saving', and, as we have pointed out earlier, somebody to do the job.

There is thus a need to develop innovate instruments and mechanisms of resource mobilisation (deposit taking) and the agency should be allowed to exploit this by becoming a deposit taking

body and provide three basic requirements (UNCHS, 1989:1) which would encourage people to save with it. These are (a) monetary stability, (b) a real return on financial investment, and (c) confidence in the security and stability of financial institutions. One unwanted effect of the introduction of such a savings and loans approach would be the greater effort on the agency to produce houses so as to avoid a situation where there is an inadequate supply of houses for a greater number of qualified loanees. However, to avoid such problems, savers can be required to have saved for a certain number of years and up to a certain percentage of loan size before they can be eligible. This precondition will help to solve both the problem of liquidity while at the same time to gauge creditworthiness of the borrowers. A degree of default may be expected in such a venture but according to the UNCHS (1991), 'this is not necessarily more than is suffered by formal institutions, and is often considerably less'. As shown by the Housing Development Finance Corporation of India (HDFC), this approach - if properly run - can be very encouraging. We suggest that

7.4.5.2 The SHDC should become a deposit taking body and use the mobilised savings to give loans to those as specified in recommendation 7.4.1.c and 7.4.4.b.

7.4.5.c Strategic Planning

No activities can operate successfully without the support of the appropriate institutions and regulations. Seen from the top, such institutions and regulations are perceived as necessary to produce acceptable living environments, but are experienced as obstacles toward such environments from the bottom. This need to improve the institutional and regulatory frameworks is paramount especially in a federal system. The federal system offers both opportunities and problems. While allowing decentralisation and autonomy, it can also result in poor co-ordination and duplication of activities among its implementation arms. Housing responsibility in Malaysia, as we have seen, is shared between the federal government and state governments. Akin to other countries that adopt such a system, the states are in control of local government and land, while urban planning responsibility falls on both states and the central government. In Malaysia, such a complex arrangement is further compounded by the mushrooming of ad-hoc agencies, especially after Independence, who formulate their own policies and implement their own projects according to their own criteria. The need for this greater co-ordination is reflected by the anomaly in low cost house prices fixed by the federal and state government of Sarawak, while the eligibility income level remains the same in both cases. Either the state raise the eligibility income levels to reflect the sales price of these houses in the state or adopt the nationally fixed price levels.

For the preceding discussion to take effect a policy of co-ordination is needed between these various agencies involved and to extend it right up to the federal government, since housing policy can operate better when co-ordinated with macroeconomic policy than on its own. Within this national context, the federal government should be left to set national policies, priorities and guidelines within which state agencies such as the Sarawak Housing and Development Commission can operate to help stimulate the housing market. Within the state context, the Commission is freed from its policy formulation responsibility and can now focus on improving its implementation capacity and take on a co-ordinating role, and only involve itself in direct provision where local conditions demand it, as we have described above.

The enabling strategy is not actually a new idea as it has been implemented since the mid-eighties (UNCHS, 1992) focusing on institutional management at the local level in the form of improving land allocation and fiscal procedures. This approach should therefore be adapted to the local situation to take advantage of its decentralised traditions by introducing a coherent co-ordination of functions between vertical and horizontal structures of government. The important contribution played by the co-ordination among agencies is also central to the success of any land policy. In this case, an integrated policy approach is called for where co-ordination is properly established among participating agencies. This role, which should be taken by the SHDC, would require the preparation of a long term plan, rather than the current reactive and ad-hoc responses. In this respect the SHDC should

a) identify the effective demand of the low income households;

b) project the number of housing units needed, the amount and location of land required as well as the financial commitments necessary and make plans based on this, rather than leaving it to the whim and fancy of the politicians, who make bombastic statements based on the political expediency of the day;

The findings will identify the best course of action to be taken and may, in most likelihood, be implemented with the collaboration of other non-housing agencies especially those involved in economic and land development in the rural areas. Once determined, the approach to take would be discussed among all participating agencies, including the private sector, and the contributory role of each established. Following on from this we recommend that

7.4.5.3 The SHDC should act as the co-ordinator of housing actors at state level and prepare a long term strategic plan for housing.

7.4.5.d Project Implementation

In direct contradiction to the total abandonment of housing provision as suggested by enabling strategy, we propose that it should be continued but selectively by properly targeting it to the very poor, and support it with enabling policies elsewhere to encourage shelter provision by private individuals, the private sector and, where necessary, a joint venture between the agency and the private sector or the agency and other state agencies, especially land development authorities.

Failures identified in the study are not inherent characteristics of the project approach[11] and there are sufficient examples to show that properly implemented, the project approach generally adopted in state intervention can be successful in meeting the objectives to address the needs of low income groups. However, as we have warned many times elsewhere in the study, the type of projects will depend on the political economic context of the situation. This has been verified by the UNCHS who, in its study of such successful projects, has warned that 'any approach is likely to have limitations as well as benefits and some will work better in some contexts than in others (1991:2). Empirical evidence provided by the UNCHS above proves that the project approach can help to increase housing quantity and improve housing quality; reduce housing prices and inputs prices; encourage investment, employment and fiscal performance to consequently reduce poverty, thus increase affordability; to expand capacity of the agency and finally, to create an appropriate institutional framework.

Whatever its limitations, this approach is attractive to a parastatal agency which has to operate under strict financial and administrative procedures in pursuance of its policy implementation role. Among the advantages of the project approach which fit into these procedures are:

a it is an effective means of translating development plans and policies into specific courses of action;

b it is a vehicle for mobilising and allocating resources to development activities;

c it can be analysed and appraised before funds are committed;

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11 Dandot (undated) identified a number of factors causing shortfall in project implementation in Sarawak and among these are land issues (timely availability and contiguity), implementation capability and capacity of executing agencies and contractors, delay in the release of allocated funds, escalation of prices, poor response from landowners and absence of a proper monitoring system, all of which are, although not directed to the SHDC, very relevant to explaining its poor performance.

d it can be used to channel development resources to specific groups of beneficiaries and to particular locations (Rondinelli, 1983).

Where the SHDC is not directly involved in the production of low cost houses, the effort should be directed at enabling the private developers and individuals to participate in housing production. In the first case, the SHDC and the state should take the cue from the Peninsula where the state provides the land (and infrastructure) for the private sector to develop housing. However, unlike the practise adopted here, and on top of recommendations 7.4.2.c, 7.4.2.d, 7.4.2.e and 7.4.2.f, we further recommend that

7.4.5.4 The private developer should also allocate a certain percentage of the houses as medium cost, thus reducing the number of high cost houses it is allowed to construct.

This is deemed necessary as the USAID (1988: 16) remarked

> *'in country after country, the greater purchasing power of the middle-income households has enabled them to usurp shelter solutions intended for the poor when no alternatives were available to them [the middle income households]'*

That similar situation exists in Peninsular Malaysia (Wong, 1986) means that more than likely it also occurs in the state as the its record on low cost housing production is far worse than that of the Peninsula. Moreover, as we have highlighted earlier, the construction of medium cost houses would provide the longest chains of moves among low income households in a filtering process.

7.4.5.e Status of the Ministry

Last but not least, the Minister of Housing post should not be treated as a transient portfolio since the high turnover of Ministers effectively detach the activities of the SHDC from the Cabinet, expose it to the personal interests of these Ministers, and extract less commitment from them. In the last decade the SHDC, who is pushed to the limit to purchase good land, has had to

i) dispose of its lands to private developers and then go begging for more land from the state

ii) buy land at market price from sellers who initially bought it from the state at premium prices and

iii) buy scattered parcels of poor quality land

all at the instructions of the Ministers. Such incidents, of course, would have been avoided had the portfolio been treated seriously, manned by a permanent Minister, at least for the life of an Assembly, to continuously monitor the SHDC's activities and be accountable for them.

7.5 FUTURE RESEARCH DIRECTIONS

The findings of the study have certainly confirmed all the hypotheses that it has set out to test, but are by no means exhaustive. Some of these findings are pretty straight forward, such as those related to the accessibility of the target population, the habitability of the houses and sustainability of replicability of the projects, and corroborate the findings made by other researchers carried out elsewhere on the same subjects. The findings on affordability, however, would require further research in order to both contrast and compare the findings that have been established here and elsewhere. What we have attempted to do in this study is to apply different types of analytical techniques on government mortgage records, namely ratio and regression analyses in order to find out the affordability levels of the beneficiaries and to test whether they are significant in the determination of arrears. Although our findings suggest so, the results from the regression and logistic analyses, although significant, indicate that the determinants of arrears and the probable causes of defaulting among a fair proportion of the sample cannot be explained by the two models. Findings from a similar research would assuredly indicate the generality of this situation, that while rent-income ratio is significant, it is by no means the over-riding determinant of affordability. If we can provide similar empirical evidence, probably with the application of other rigorous techniques (e.g. discriminant analysis) on similar or different data (for instance, data held by financial institutions) our theoretical understanding of how household behaviour, especially in the face of the differential eligibility criteria adopted by these different bodies, determines its affordability could certainly benefit. It would also be interesting to examine the role exerted by income per capita in determining a household's affordability level.

On a more specific level, there is an urgent need to initiate research into the actual demand patterns in the state in order to get the right assumptions on affordability and establish the real willingness to pay estimates of the population. The significant role that can be played by other delivery systems should also be looked into, especially the co-operative housing approach and the importance of the NGO's.

7.6 CONCLUSIONS

This chapter has summarised the discussions from previous chapters and looked at the implications of the findings identified by the analyses. There is plentiful evidence to show that the provider-based approach has failed to live up to its objectives, and our findings have supported this. However, findings from the case studies show that it is not the approach itself which is faulty but weakness in the institutional framework. The outcome of this study has highlighted four points:

1. it provides information about the reasons why the target group's accessibility to the low cost houses has not improved;
2. it shows the huge single contribution made by high unrealistic standards on the quality and the costs (and subsidies) of the low cost houses;
3. it specifies the exact amount of subsidy that the state has to inject for every unit of low cost house and to how many ineligible households;
4. it identifies the causes as to why households cannot keep up with their mortgage payments.

The identification of these specific causes to the failures of the provider-based approach has allowed us to suggest definite solutions in order to loosen up the web of problems associated with it. The focus of the recommendations, not surprisingly, centre on areas that we have known all along as causes to these problems, namely; allocation process, standards, land and finance.

Careful attempts have been made to ensure the generality of the findings, but because of its specific nature and limited scope, we have suggested that similar research may have to be carried out in order to compare the findings identified here with those in different situations, particularly among borrowers of private financial institutions and their affordability levels. In conclusion, the proper understanding of housing affordability among the low income is important and needs urgent attention particularly because of the variable proportion of income involved in their consumption of housing and the multitude of factors influencing this level. This study has started the first step in this direction and the findings could assist housing providers in the state to identify the appropriate type of housing to be provided.

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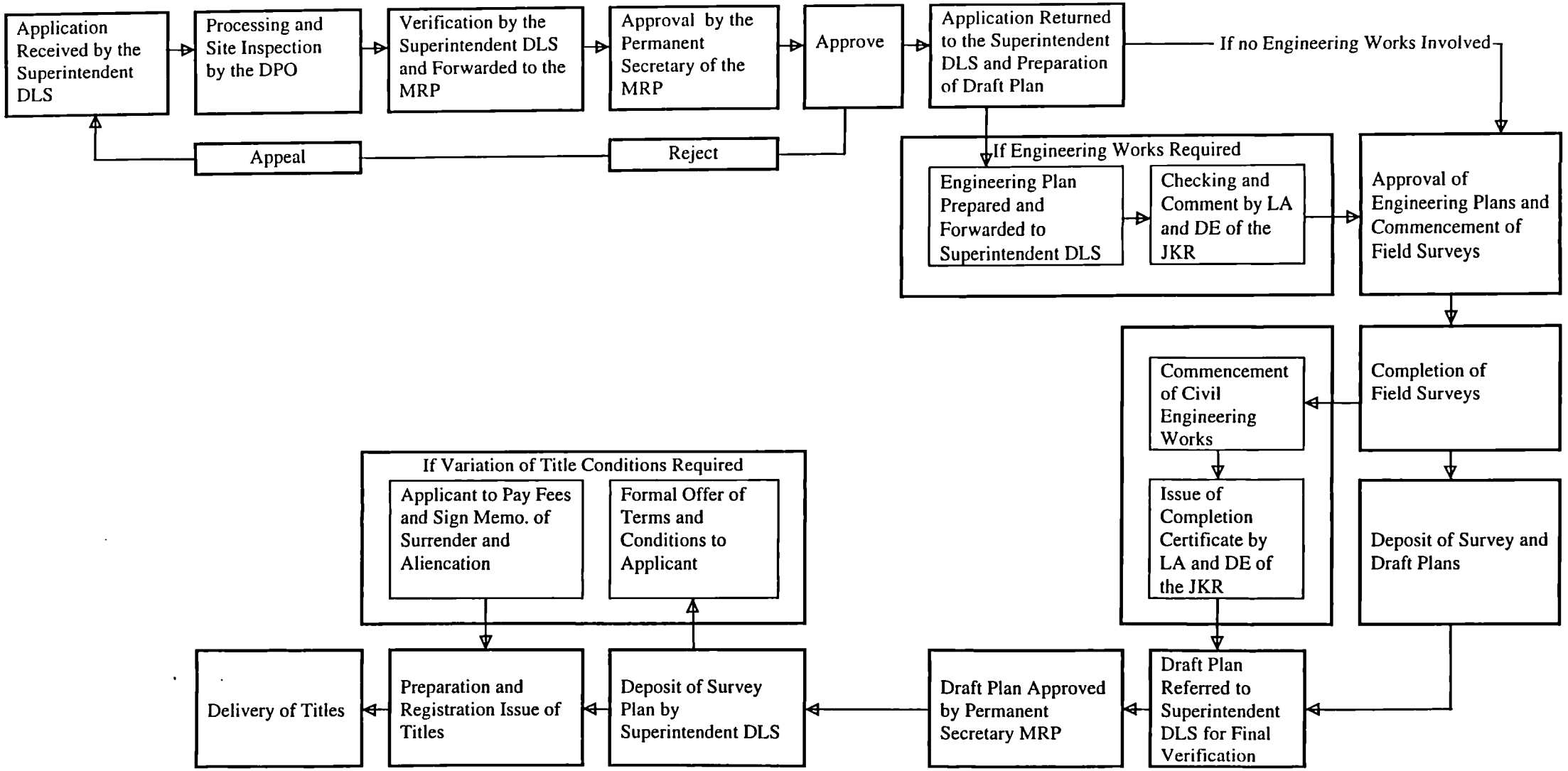
APPENDICES



DLS - Director of Land & Surveys Dept.
DPO - Divisional Planning Officer
MRP - Ministry of Resource Planning
DE - Divisional Engineer
LA - Local Authority
JKR - Public Works Department

Appendix 3.1 - Flow Chart for Application for Sub-Division of Land

Appendix 4.1 - Household Survey Questionnairre

UNIVERSITY OF NEWCASTLE UPON TYNE
SCHOOL OF ARCHITECTURE

SARAWAK HOUSING AND DEVELOPMENT COMMISSION
HOUSEHOLD SURVEY
CONFIDENTIAL

DATE OF INTERVIEW _____ NAME OF INTERVIEWER _____

HOUSEHOLD CODE _____ NAME OF HOUSING AREA _____

ASK THE FOLLOWING QUESTIONS TO THE HEAD OF THE HOUSEHOLD OR CLOSE RELATIVE:
0 - NOT AVAILABLE/DO NOT KNOW

1. Member of Household Interviewed:
   1 Head of household 2 Wife of Head of household
   9 Others (Specify) _____ ____ [1]

2. Marital Status:
   1 Single 2 Married
   3 Widower 4 Widow
   5 Divorcee ____ [2]

3. Sex of Interviewee:
   M Male F Female ____ [3]

4. Year of Birth: 19 ___ ____ [4-5]

5. Place of birth:
   1 Kuching 2. Outside Kuching/1st Div.
   3 Outside 1st Div ____ [6]

6. What is your highest educational attainment?
   1 Not educated 2 Primary education
   3 Secondary edu. 4 College education
   5 University edu. ____ [7]

7. How many households are in this house? ____ [8]

8. How many members are there in your household? ____ [9-10]

9. What is your occupation? _____ ____ [11]

10. What is your occupational status?
1 Full time 2 Part time
3 Casual 4 Others (Specify) _____ ____ [12]

11. Are you:
1 Self employed 2 Wage earner
3 Others (Specify) _____ ____ [13]

12. Have you been unemployed during the last 5 years?
1 Yes 2 No *(Go to Q15)* ____ [14]

13. If yes, how many times?
8 Not applicable ____ [15]

14. How long? (Months)
8 Not applicable ____ [16]

15. Have you lived in another house in Kuching before residing at the present address?
1 Yes 2 No *(go to Q20)* ____ [17]

16. If you have, how long did you live at the last residence? (Years)
8 Not applicable ____ [18]

17. What was your status at the last residence?
1 Owner/Occupier 2 Tenant
3 Staying with parents 4 Staying with children
5 With relatives 6 Squatting
8 Not Applicable 9 Others (Specify) _____ ____ [19]

18. If tenant, how much was the monthly rent? (MR'0)
88 Not applicable ____ [20-21]

19. Type of last residence?
1 Wooden House 2 Detached/Semi-detached
3 Longhouse 4 Terrace/Link
5 Flat 6 Shophouse
8 Not Applicable 9 Others (Specify) _____ ____ [22]

20. When did you first move into this house? 19(..) ____ [23-24]

21. How many rooms are there in this house? ____ [25]

22. How many rooms are used by the household? ____ [26]

23. What do you do with the extra rooms, if any?
1 Rented out 2 Left idle
8 Not applicable 9 Others (Specify) _____ ____ [27]

24. If rented out, how much per month? (MR'0)
8 Not applicable ____ [28-29]

25. Do you, or any member of the household, rent or own this house?
1 Owned *(Go to Q27)* 2 Rented
9 Others (Specify) _____ ____ [30]

26. If rented, how much do you pay per month? (MR'0)
8 Not applicable ____ [31-32]

27. If owned, how much did the house cost? (MR'000)
8 Not applicable ____ [33-34]

28. From whom did you purchase the house?
1 Individual 2 Housing Commission
8 Not applicable 9 Others (Specify) _____ ____ [35]

29. Did you have to pay a deposit for the house?
1 Yes 2 No *(go to Q32)*
8 Not applicable ____ [36]

30. If yes, how many percent of the house price?
1 05% 2 10%
8 Not Applicable 9 Others (Specify) _____ ____ [37-38]

31. How did you raise money for the deposit?
1 EPF 2 Personal Savings
3 Borrowed (family) 4 Borrowed (friends)
5 Sale of property/jewellery 8 Not applicable
9 Others (Specify) _____ ____ [39]

32. Where did you raise money for the loan?
1 State Treasury 2 Federal Treasury
3 SHDC 4 Commercial Banks
8 Not applicable 9 Others (Specify) _____ ____ [40]

33. How many percent of the house price is the loan?
8 Not applicable ____ [41-42]

34. Is your house good value for money?
1 Yes 2 No
8 Not applicable ____ [43]

35. How much is the monthly instalment? (MR'0)
8 Not applicable ____ [44-45]

36. Are you satisfied with this amount?
1 Yes 2 No *(go to Q38)*
8 Not applicable ____ [46]

37. If Yes, are you also satisfied with the house?
1 Yes *(go to Q40)* 2 No
8 Not Applicable ____ [47]

38. If your answer is No, why not?
1 Too much/satisfied with the house *(Go to Q40)*
2 Too much/not satisfied with the house
8 Not Applicable ____ [48]

39. If you are not satisfied with the house, which of the following would you like be improved? Pick three in order of preference:
1 Sitting Room 2 Kitchen
3 Toilet 4 Bathroom
5 Water 6 Electricity
7 Bedroom 8 Not Applicable
9 Others (Specify) _____ ____ [49]

40. Would you consider moving to a similar house somewhere else if the monthly instalment is less?
1 Yes *(Go to Q42)* 2 No
8 Not Applicable ____ [50]

41. How much of your monthly income would you be willing to pay before you would consider such a move? (MR'0)
8 Not Applicable ____ [51-52]

42. What is the highest amount you are able to pay for housing per month? ____ [53-54]

43. Have you made any changes to the house?
1 Yes 2 No *(go to Q47)* ____ [55]

44. If yes, please specify which part of the house.
1 Sitting Room 2 Bedroom
3 Dining Hall 4 Kitchen
5 Toilet 6 Bathroom
8 Not Applicable 9 Others (Specify) _____ ____ [56]

45. What type of work was carried out?
1 Improvement 2 Renovation
3 Extension 4 Addition
8 Not Applicable ____ [57]

46. How much did you spend on the work? (MR'00)
8 Not Applicable ____ [58-59]

47. Do you intend to continue staying here?
1 Very likely 2 Likely
3 Not sure 4 Unlikely
5 Very unlikely ____ [60]

48. If very likely or likely, why?
_____ ____ [61]

49. Do you own any of the following properties other than this house in Kuching?
1 Land 2 House
3 Land and House 9 Others (Specify) _____ ____ [62]

50. Where?
1 Kuching 2 Outside Kuching/1 Division
3 Other Divisions ____ [63]

51. Do you think the government is doing enough to provide low cost housing for the people?
1 Yes 2 No ____ [64]

52. If No, why not?
_____ ____ [65]

53. Do you agree or disagree with the following statements;
1 Agree 2 Disagree
a) The government is NOT trying hard enough to supply low cost housing for the poor people ____ [66]
b) The government does NOT keep its promise regarding the provision of low cost houses ____ [67]
c) The government IS helping people of all races to obtain better and cheaper housing ____ [68]

54. What is your monthly salary? (MR'0) ____ [69-70]

55. Extra income from overtime/bonus/commission? (MR'00) ____ [71-72]

56. Other income per month? (MR'0) ____ [73-74]

57. Monthly income from other members of the household? (MR'0) ____ [75-76]

58. Do you have any personal savings?
1 Yes 2 No ____ [77]

59. If yes, what type?

1 Amanah Saham
2 Post Office
3 Commercial Bank
4 Tabung Haji
5 Co-operative Society
6 Gold/jewellery
8 Others (Specify) _____ ____ [78]

60.

RELATION	SEX	AGE	EDU	OCC	INC $/mnt	
Head	M					[79-83]
Wife	F					[84-88]
						[89-93]
						[94-98]
						[99-103]

61. Expenses per week/month ('0)

	WEEK	MONTH	
Mortgage/Rent			[104-105]
Food (in)			[106-107]
Electricity/Water			
Fuel (cooking)			
Transport			
Health			
School			
House Maintenance			[108-109]
Remittances to family			
Others			[110-111]
Total			[112-113]

ANSWER CODING:

MONTHLY INSTALMENT/EXPENSES

M$ <49 = 1	M$ 150-199 = 4	M$ >300 = 7
M$ 50 - 99 = 2	M$ 200-249 = 5	
M$ 100-149 = 3	M$ 250-299 = 6	

MODIFICATION EXPENSES

M$ <250 = 1	M$ 501-750 = 3	M$ 1001-1250 = 5
M$ 251-500 = 2	M$ 751-1000 = 4	M$>1251 = 6

RELATIONS

Head = 1	Parent = 4	Others = 9
Wife = 2	Child-in-law = 5	
Child = 3	Grandchild = 6	

SEX

Male = M	Female = F	

AGE

<10 = 1	31-40 = 4	> 61 = 7
11-20 = 2	41-50 = 5	
21-30 = 3	51-60 = 6	

EDUCATION

None = 1	Secondary = 3	University = 5
Primary = 2	College = 4	

OCCUPATION

Unemployed = 1	Professional/Technical = 4
Administration/Clerical = 2	Service Workers = 5
Agricultural = 3	Production Workers = 6
Others (Specify)_____ = 9	

MONTHLY INCOME($M)

M$ <299 = 1	M$ 500-599 = 4	M$ >800 = 7
M$ 300-399 = 2	M$ 600-699 = 5	
M$ 400-499 = 3	M$ 700-799 = 6	

THANK YOU VERY MUCH FOR YOUR CO-OPERATION AND ASSISTANCE

Appendix 4.2 - Introductory Letter Distributed to the Households to be Surveyed

Bil. Kami: SPPS/RD/02/(1) Tarikh: 10.2.93

Tuan/Puan,

PER: PEKELILING KAJIAN ISI RUMAH SKIM PERUMAHAN SPPS DI SEKITAR BANDARAYA KUCHING.

Dengan segala hormatnya, dimaklumkan bahawa Suruhanjaya Perumahan dan Pembangunan Sarawak (SPPS) akan menjalankan kajian isi rumah bagi kesemua Skim Perumahannya di sekitar Bandaraya Kuching.

Diantara lain, tujuan diadakan kajian sedemikian ialah untuk mengenalpasti kedudukan ataupun status isi rumah yang mendiami skim-skim Perumahan SPPS. Adalah diharapkan hasil kajian ini nanti dapat dimanafaat untuk memperbaiki keadaan sedia ada di skim-skim Perumahan tersebut.

Kajian ini akan dikendalikan oleh Pegawai-Pegawai Penyelidik SPPS yang akan melawat dari rumah ke rumah. Sampling kajian ialah 1 unit rumah bagi setiap 2 unit rumah. Kajian di RPR Batu Kawa II akan diadakan pada 11 Februari 1993 dan 12 Februari, 1993 mulai dari jam 9.00 pagi hingga 4.00 petang.

Kerjasama tuan/puan didalam menjayakan kajian ini sangatlah dihargai dan diucapkan ribuan terima kasih.

Sekian.

"BERSATU BERUSAHA BEBRAKTI"

Yang benar,

[JOEL BERINAU ANAK INI]
bp Ketua Pegawai Eksekutif
Suruhanjaya Perumahan dan Pembangunan SARAWAK

JBB/hj

Tkt. 7, 19 & 20, Wisma Saberkas, Jalan Tun Abang Haji Openg, Peti Surat 1504,
93730 KUCHING, Sarawak, Malaysia. Tel: 082-244381/2 Fax: 082-240133

Appendix 6.1 - Summary of Data Inputs for NPV Model

	SIOL KANAN	BATU KAWA
PROJECT FEATURES		
Income Range of Target Households	MR 750	MR 750
Selling Price to Households	MR32,000	MR32,000
Estimate of Market Value at Completion	MR55,000	MR65,000
MARKET CONDITIONS		
Expected Background Inflation	5.0%	5.0%
Expected Real Increase in Land Price	5.0%	5.0%
Expected Real Increase in Structure Prices	3.0%	3.0%
Expected Real Increase in Rents	5.0%	5.0%
Real Discount Rate (riskless)	10.0%	10.0%
Deposit Amount	MR1,500	MR1,500
Months Deposit Held Without Interest	6	6
Search and Moving Costs (Amount)	MR1,500	MR1,500
Search and Moving Costs (% of Income)	17.0%	17.0%
Total Tenant Transactions Cost	MR1,738	MR1,738
Extra Tenant Transactions Costs	MR113	MR113
RAW LAND COSTS		
Plot Size (sq. ft.)	1300	1300
Ratio of Total Land to Plot Size	4.0	4.0
Acquisition Cost of Land (per sq. ft.)	MR0.18	MR0.58
Market Price of Raw Land (per sq. ft)	MR1.80	MR5.80
Conversion Premium (fee) (per sq. ft.)[1]	MR0.45	MR1.45
Financial Cost of Raw Land	MR1,513	MR4,885
Economic Cost of Raw Land	MR11,700	MR37,700
Raw Land Subsidy	MR10,187	MR32,815
COSTS OF SITE DEVELOPMENT & INFRASTRUCTURE		
Costs of Site Development (actual per plot)	MR671	MR3,600
Costs of Infrastructure (actual per plot)	MR2,449	MR2,449
Site Development Subsidy (%)	12.0%	12.0%
Infrastructure Subsidy (%)	12.0%	12.0%
Professional Services Subsidy (% of Site Cost)	7.0%	7.0%
Economic Cost of Developed Plot	MR14,820	MR43,749
Raw Land Subsidy	MR10,187	MR32,815
Infrastructure Subsidy, Period 0	MR 2,614	MR 2,966
Financial Cost of Developed Plot	MR 2,018	MR 7,968

1 25 per cent of market price of raw land

	SIOL KANAN	BATU KAWA
RENTAL INCOME		
Market Rent	MR250	MR280
Annual Rent to Value	0.055	0.052
RENT CONTROLS & OTHER REGULATIONS		
Bumiputra Discount	0%	0%
Percent of Units Allocated to Bumiputras	100.0%	75.0%
Ratio of Controlled to Market Rent	MR7,200	MR7,200
Economic Cost of Building Standards	MR1,220	MR1,220
Economic Cost of Permits	MR1,200	MR1,200
DIRECT BUILDING COSTS		
Size of Unit (sq. ft.)	728	728
Fixed Cost Per Unit	MR0	MR0
Marginal Cost Per Sq. Ft.	MR24	MR24
Construction Cost (inc. indirect taxes)	MR17,472	MR17,472
Materials Subsidies (per dwelling)[2]	MR6,224	MR6,224
Labour & Other Construction Subsidies	MR3,000	MR3,000
Construction Finance Subsidies	MR1,200	MR1,200
Economic Cost Per Structure	MR17,472	MR17,472
Construction Subsidies	MR10,424	MR10,424
Financial Cost Per Structure	MR11,248	MR11,248
Net Depreciation (straight line, %)	2.0%	2.0%
OPERATING AND RECURRENT COSTS		
Net Depreciation (straight line, %)	2.0%	2.0%
Maintenance & Repairs (% of Structure Cost)	5.0%	5.0%
Management Fees (% of Structure Cost)	7.0%	7.0%
Economic Costs of Infra Connections (p.a)	MR180	MR180
Financial Charges for Infra Connections (p.a)	MR60	MR60
Additional Reduction in Recurrent Infra Charges (%)	30.0%	30.0%
Recurrent Infrastructure Subsidy	MR138	MR138
FINANCING		
Loan Term (years)	25	25
Loan to Value Ratio	95.0%	95.0%
Fixed or Variable Interest Rate	Fixed	Fixed
Nominal Fixed Rate	4.0%	4.0%
Market Fixed Rate	12.0%	12.0%
Grace Period (years)	0	0
TAXES		
Stamp/Acquisition Tax (% of SP)	3.0%	3.0%
Income Tax Rate	30.0%	30.0%
Capital Gains Tax Rate	5.0%	5.0%
Developer Income Tax Rate	30.0%	30.0%

2 20 per cent of building costs

Appendix 6.2 - Summary of Outputs for NPV Model

	SIOL KANAN	BATU KAWA
OVERALL COSTS AND BENEFITS		
Resource Cost to the Economy	(MR32,292)	(MR61,221)
Current Market Value of Unit	MR55,000	MR65,000
NET INCENTIVES AND DISINCENTIVES		
Land	MR10,187	MR32,815
Infrastructure	MR 3,789	MR 4,141
Construction Subsidies	MR10,424	MR10,424
Regulatory Costs	(MR 9,600)	(MR 9,600)
Financing	MR15,686	MR15,686
Taxes	(MR 2,178)	(MR 2,178)
Net Incentives and Disincentives	MR28,309	MR25,576)
Financial Benefit to Developer	MR32,000	MR32,000
Financial Cost to End User	(MR33,105)	(MR33,105)
Financial Benefit to End User	MR71,861	MR81,861
AFFORDABILITY		
Economic Cost of Unit	MR32,292	MR61,221
Affordability at Economic Cost of Unit	MR13,915	MR30.955
Current Selling Price of Unit	MR32,000	MR32,000
Affordability at Current Selling Price	MR 9,730	MR 9,730
Breakeven Selling Price	MR19,919	MR54,797
Affordability at Breakeven Price	MR 7,607	MR26,950
Market Price of Unit	MR55,000	MR65,000
Affordability at Current Market price	MR31,556	MR37,294
PRICE PER UNIT OF HOUSING CAPITAL		
To Developer	0.62	1.02
To End User	- 0.20	0.54
BENEFIT TO TENANT		
Market Price	MR55,000	MR65,000
Less Selling Price	MR32,000	MR32,000
Gross Subsidy to Tenant	MR23,000	MR33,000
Less Excess Transaction Cost	MR 113	MR 113
Net Subsidy	MR22,888	MR32,888
Affordability at Current Terms	MR 9,730	MR 9,730
Affordability at Market Terms	MR31,556	MR37,294

COST OF PRODUCTION

Developer's:

Land & Infrastructure Costs (inc. Subsidies)	(MR 2,018)	(MR 7,968)
Construction Costs (inc. Subsidies)	(MR 7,048)	(MR 7,048)
Regulation, Other Costs/Subsidies	(MR10,560)	(MR10,560)
Financial Cost to Developer	(MR19,626)	(MR25,576)
Of Which:		
Selling Price	MR32,000	MR32,000
Profit (+) or Loss (-)	MR12,374	MR 6,424
Financial Cost to Developer	(MR19,626)	(MR25,576)
Less Developer Regulatory Costs and Subsidies	(MR12,666)	(MR35,645)
Economic Costs	(MR32,292)	(MR61,221)

Appendix 6.3 - Selection of Independent Variables

Like most regression problems, this regression model requires decisions on which variables to include in the calculations. How and which variables are to be selected depend on the type of analysis the model is expected to do, whether it is simply to describe, explain, predict, estimate and extrapolate (Mallows, 1973). Normally, either a scattergram is plotted or a correlation analysis carried out for each of the independent variables against the dependent variable, and in this case the arrears, to identify those variables with strong relationship with the dependent variable. Some writers suggest that a properly executed regression analysis should be based on the results of scatter grams and not correlation analysis (Lewis, 1973). The independent variables used in this model are listed and described in Figures 1 and 2.

Figure 1 - Continuous Variables

1	AGE (Log Original Age) The age of the heads of households when offered the houses.
2	AGE1 (Log Current Age) The age of the heads of households at the time the survey was conducted.
3	YPC (Log Original per Capita Income) The original monthly income divided by the number of members of the household at the time the house was offered.
4	YPC1 (Log Current per Capita Income) The current monthly income divided by the number of members of the household at the time the survey was conducted.
5	RI (Original Rent-Income Ratio) The household's monthly instalment towards the house over its original monthly income.
6	RI1 (Current Rent-Income Ratio) The household's monthly instalment towards the house over its current monthly income.
7	PI (Original Price-Income Ratio) The price of the house divided by the original total annual household's salaried income expressed in number of years.
8	PI1 (Current Price-Income Ratio) The price of the house divided by the current annual household's salaried income and expressed in number of years.
9	CSCHG (Log Costs of Changes Done to the House) The total costs incured by those households who carried out changes to their houses before or after they moved in.
10	TY (Log Total Original Income) The total original household income, based on the spouse and spouse's incomes only, which the SHDC used as the criteria for allocation of houses.
11	TY1 (Log Total Current Income) The total current household income based on spouse and spouse's incomes only.

Figure 2 - Dummy Variables

1	PRYEDU (Educational Level) This is considered influential here since it determines whether one is educated enough to undertake one's responsibility seriously. Those who are better educated are generally better paid than those who are not. The defaulters fall mainly in two levels of education, primary and secondary. For the analysis, those with secondary education are treated as the reference dummy.
2	EMP (Employment Sector) It is a prevalent belief that government housing is seen as a 'gift' by those who get it. This is particularly so among government employees who traditionally support the ruling party/ies and who view themselves as the government's men. In the model, those who are in the private sector are treated as the reference dummy.
3	RACE (Race) Race, politics and economy are closely entwined in Malaysia. It is generally accepted that the Malays, the bulk of whom support the ruling party, are economically backward. The same attitude as expressed with dummy variable 2 is applicable here and as the Malays make up roughly half of the defaulters, the rest are grouped as Others and used as dummy variable in the analysis.
4	TYCHG (Types of Changes done to the Houses) The majority of the changes took the form of renovations. Households that did not make any change to their houses are used as the reference variable. It is assumed that those who made changes to their houses took on extra financial burdens and the extra burden would affect their ability to keep up with the mortgage instalments.
5	PRSTSN (Satisfaction with the House Price) This is similar to the above and is considered separately as satisfaction with the houses may not necessarily be reflected in the satisfaction of their prices. Equivalent dummy is used in this case.
6	HSSTSN (Satisfaction with the Houses) The owners' perception of the houses, whether positive or negative, will determine whether they will or will not pay the instalments grudgingly. Those who are dissatisfied will obviously have reason not to keep up with the monthly mortgage repayments. For this, satisfied owners are used as the reference since they are the least likely to default.
7	DURA (Length of Stay) It normally takes time for one's inability to pay to register. Arrears may occur in the earlier years but other influential, but temporary, factors play a part. As time passes, these temporary factors would have been ironed out, and any arrears that occur would be caused by main determinants of the houseowner's affordability. It is assumed that the longer one stays the more arrears one accumulate.
8	NTGROUP (Income Group) Two groups are indentified, the target and nontarget groups. The target group is expected to be the main defaulters since their income is lower than those of their counterparts. This, however, may not be necessarily so. Other factors like per capita income may be more influential.

Conceptually, the only way of ensuring that the best model for each subset size is found is to compute all possible subset regressions. This would normally entail an enormous amount of computational work and time. Alternative variable selection methods, known as stepwise regression methods, have been developed that can identify good (though not necessarily the best) subset model. Of the three methods of stepwise regression, i.e., forward selection, backward

selection and stepwise selection., the latter, which is used for this study, has a greater chance of choosing the best subsets in the sample data although selection of the best subset for each subset size is not guaranteed (Rawlings, 1988). However, there are a number of criteria used for the choice of subset size and for this model the criterion is the F statistics or 'significance levels'.[3]

A 5 percent significance level is usually selected in a regression analysis. The choice of a very small significance level is to avoid including any variables that do not contribute to the predictive power of the model in the population. In reality, however, many of the variables considered in any regression model have some predictive power, no matter how small. When many significance tests are performed at this level, i.e., 5 percent, the overall probability of rejecting at least one true null hypothesis becomes much larger than 5 percent. In such a situation, it is best not to estimate more parameters than can reliably be estimated with the given sample size. To do this, a moderate significance level, in the range of 10 percent to 25 percent, is more suitable (SAS Institutute Inc., 1989).

This higher level, become more critical when the sample size used in the calculations is small. In this casse, an important regressor in a model can have a large (non-significant) *p*-value especially if it is measured over a narrow range, if there are large measurement errors, or if another closely related regressor is included in the equation. On the other hand, an unimportant regressor can have a very small *p*-value in a large sample (SAS Institute Inc., 1989). In the context of this study where the sample size has been greatly reduced, both arguments against selecting a small significance level of 5 percent are valid. The level adopted for our study is as recommended by Bendel and Affifi (1977), significance level to enter (SLE) at 0.20 and significance level to stay (SLS) at 0.15.

In stepwise regression analysis[4], only variables with significant *F* statistics, i.e., the *F*-test of the partial sum of squares of the variable, were considered and included into the calculation. Variables are added one by one to the model, and the *F* statistic for a variable to be added must be of a 'significance critical level'. Once a variable is added the model then looks at all the variables already included and then deletes any variable that does not produce an *F* statistic significant at the same level. Once this check is completed and the necessary deletions are done, another variable will then be added and the process is repeated until none of the variables outside the model has an *F* statistic significant at the default level while every variable left in the model is significant at the same level, or when the next one to be added is the very same one which has just been deleted.

Hence, it not only looks at the individual contribution of each independent variable to the model, but also the overall contribution of all variables considered in it. The *F*-test mentioned here is not to be viewed as the classical test of significance used in statistics other than its use as a stopping criteria to determine whether the variables should be entered or excluded from the model. The other two methods, forward and backward linkages, were also applied with the same set of variables and both came out with the same model indicating that it is the best subset in the subset size (Berk, 1978). Nevertheless, a model chosen by any of these methods has to be thoroughly check for any inadequacies (Rawlings, 1988) and this was also done and the results will be discussed later.

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3 For a discussion on the type and best criterion, see Rawlings (1988).

4 For a discussion on the advantage of this option over those of forward and backward selection procedure, see the SAS Institute Inc., (1989).

Appendix 6.4 - Diagnostics Results for the Log Regression Models for Sub-Samples A & B.

Models chosen by stepwise regression must be checked thoroughly for inadequacies and to ensure the validity of the results. Four tests were carried out and these are:

a. Autocorrelation diagnostics
b. Collinearity diagnostics
c. Influential diagnostics
d. Heterosdecasticity diagnostics

Each of these tests and their results are summarily described and discussed below.

a Autocorrelation Diagnostics

It is expected that variables collected from the same respondent are not independent of each other. The opposite is true when they are collected from different respondents. This independence forms the basis of assumptions in multivariate statistical analyses and is crucial to the validity of the results (Affifi and Clark, 1990). A situation where the collected observations are independent would result in a non-correlation of residuals. Otherwise, autocorrelation, where, each error is correlated with the error immediately before it, exists and points to a systematic lack of fit. To check whether the model suffers from this incidence, the Durbin-Watson *d* statistic was performed to test that autocorrelation is zero. The result shows that the DW statistic is 1.823 with the estimate for the first-order autocorrelation coefficient at 0.088. Since the DW statistic is very close to 2, that is when the errors are uncorrelated, there is little evidence to suggest that there is significant autocorrelation present in the model.

Figure 1 - Result for Sub-Sample A

Durbin-Watson D	2.110
(For Number of Obs.)	60
1st Order Autocorrelation	-0.070

Figure 2 - Result for Sub-Sample B

Durbin-Watson D	2.399
(For Number of Obs.)	83
1st Order Autocorrelation	-0.204

b Collinearity Diagnostics

Collinearity occurs when a regressor is nearly a linear combination of other regressors in the model, i.e. they measure the same thing. This condition will affect the parameter estimates and result in high standard errors. If such a situation exists, these variables have to be identified and excluded from the model. This test was carried out and there is no evidence to suggest that such a problem exists.

Table 1 - Collinearity Diagnostics for Sub-Sample A

No	Eigenvalue	Condition Index	Var Prop INTERCP	Var Prop RI	Var Prop YPC1	Var Prop NTGroup
1	3.52700	1.00000	0.0059	0.0086	0.0037	0.0188
2	0.35643	3.14569	0.0184	0.0505	0.0013	0.6829
3	0.08335	6.50502	0.3784	0.7965	0.0195	0.0394
4	0.03322	10.30436	0.5973	0.1443	0.9755	0.2588

Table 2 - TOL AND VIF levels for Sub-Sample A

Variable	DF	Tolerance	Variance Inflation
INTERCP	1	.	0.00000000
RI	1	0.75650147	1.32187450
YPC1	1	0.54790269	1.82514163
NTGroup	1	0.68950690	1.45031182

Two indicators are used to observe the incidence of serious collinearity for this model. These are the VIF value which should not be more than 10 (Snee and Marquandt, 1984) and the condition number which should not exceed 30. The output above shows, for Sub-Sample A the largest condition number is associated with component number four and is only slightly over 10. However, for Sub-Sample B, two observations, number 5 and 6, exceed this level. This is explained by their low Prob>F value of 0.0927 and 0.1409 respectively in the stepwise regression, but were selected as the significance level to stay was decided at 0.15. Their influence are therefore insignificant at the 0.01 level. As for the VIF values, neither models are affected by this problem. This is confirmed by the low variance inflation factors, as shown in Table 2 and Table 4, the highest of which is only 1.82 (Sub-Sample A) and 2.16 (Sub-Sample B) indicating an R^2 distant from unity, and hence points to non-collineartiy (Belsey and Welsch, 1980).

Table 3 - Collinearity Diagnostics for Sub-Sample B

No	Eigenvalue	Condition Index	Var Prop INTERCP	Var Prop RI	Var Prop YPC1	Var Prop AGE1	Var Prop CSCHG	Var Prop DURA
1	5.61553	1.00000	0.0000	0.0014	0.0011	0.0001	0.0002	0.0006
2	0.25070	4.73276	0.0001	0.0185	0.0060	0.0001	0.0002	0.8662
3	0.10276	7.39235	0.0015	0.1501	0.0720	0.0026	0.0127	0.0671
4	0.02515	14.94389	0.0000	0.7695	0.8710	0.0000	0.0004	0.0373
5	0.00494	33.73014	0.0101	0.0343	0.0378	0.2347	0.5751	0.0205
6	0.09208	78.09212	0.9883	0.0262	0.0121	0.7624	0.4115	0.0023

Table 4 - TOL AND VIF levels for Sub-Sample B

Variable	DF	Tolerance	Variance Inflation
INTERCEP	1	.	0.00000000
RI	1	0.46249525	2.16218439
YPC1	1	0.46811458	2.13622911
AGE1	1	0.93256686	1.07230917
CSCHG	1	0.74291995	1.34604004
DURA	1	0.94520015	1.05797698

c Influential Diagnostics

Observations with Rstudent greater than 2 in absolute value may indicate strong leverage on the outcome of the model and may need further investigation. Large Dffits and Dfbetas values also indicate influential observations, the later is influential in estimating a given parameter. Suggested cutoff points for both Dffits and Dfbetas are 2.0.

Table 5 - Probable Influential Observations for Sub-Sample A

Obs	Rstudent	Hat Diag	Cov Ratio	Dffits	INTRCP Dfbetas	RI Dfbetas	YPC1 Dfbetas	NTGroup Dfbetas
5	**2.5721**	0.0603	0.7261	0.6517	0.3362	0.1665	-0.4485	0.5181

The output table for Sub-Sample A above shows that only one observation, observation number 5, has a large Rstudent levels (no high readings are observed in the other matrices). For Sub-Sample B, (see the following table) four observations have high values; three (observations 30, 58 and 71) are marginally high while observation 15 has an unusually high Rstudent value. This same observation displays a high Dfitts value and also a high Dfbetas value for one of its variable, i.e., current income per capita (YPC1). Whether it is detrimental will depend on what happens in the other readings (Belsey, Kuh and Welsch, 1980). However, taken together, i.e., 1 observation out of 60 (Sub-Sample A) and 82 (Sub-Sample B), none of these observations exert any unnecessary influence on the model.

Table 6 - Probable Influential Observations for Sub-Sample B

Obs	Rstudent	Hat Diag	Cov Ratio	Dfitts	INTRCP Dfbetas	RI Dfbetas	YPC1 Dfbetas	AGE1 Dfbetas	CSCHG Dfbetas	DURA Dfbetas
15	**4.3349**	0.2226	0.3696	**2.3198**	0.1707	-1.3831	**2.1652**	-0.5077	0.0785	0.0358
30	**2.0577**	0.0567	0.8282	0.5046	-0.0903	0.0154	-0.2331	0.0737	0.1522	0.1705
58	**2.0919**	0.0266	0.7942	0.3459	0.1712	0.0676	-0.0979	-0.1845	-0.0668	0.1803
71	**2.0063**	0.0299	0.8180	0.3520	0.1183	0.1092	-0.0477	-0.1977	0.0263	0.1805

d Heteroskedasticity Test

A model that has a large number of observations with absolute values of studentized residuals greater than two is an inadequate model. In Sub-Sample A, only 2 out of the 60 observations have values greater than 2, indicating that the model is fairly from this problem, or at worse has only a slight possibility of having non-constant variance. This marginal effect of the two observations on the model is further supported by the Cook's D values, as shown in Table 7 below, none of which exceeds the 2 cutoff point. One of the two observations that display high studentized residuals are the same as those identified in the influential diagnostics. It can therefore be concluded that, based on the above diagnostic tests, the model's basic assumptions are free from from violations.

Table 7 - Studentised Residual and Cook's D for Sub-Sample A

Obs	Residual	Std Err Residual	Student Residual	-2	-1	-0	1	2	Cook's D
5	2.0170	0.823	2.452			|****		|	0.096
23	1.9902	0.804	2.477			|****		|	0.177

A generally similar trend can be seen from the diagnosis output carried out for Sub-Sample B, except that one of the observations, observation number 15, has an unusually high residual value. This is again reflected in the influential diagnosis described earlier where the same observation displayed a high Rstudent value. Nevertheless, the low Cook's D value again indicate the marginal influence these observations have on the model, thus freeing it from violations.

Table 8 - Studentised Residual and Cook's D for Sub-Sample A

Obs	Cook's Residual	Std Err Residual	Student Residual	-2	-1	-0	1	2	Cook's D
15	328.0	83.952	3.907			|******		|	0.096
23	186.4	92.477	2.016			|****		|	0.177
58	192.3	93.941	2.047			|****		|	0.019