

**THE IMPLEMENTATION OF PUBLIC LOW-COST HOUSING
PROGRAMME IN MALAYSIA 1976-1990**

by

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ABSTRACT

THIS thesis has examined the problem of target under-achievement of the Public Low-Cost Housing Programme (PLCHP) in three Malaysian five-year development plans between 1976 and 1990. The study tested the “policy implementation” approaches and data were analysed by the combination of both quantitative and qualitative techniques. The study focused on: (a) the project’s preparation and planning; (b) the projects’ funding and resourcing; and, (c) the effect of inter-actions amongst agencies and actors at the local level. The study confirmed that there were associations between these factors and the programme’s performance.

Analyses on time taken to complete the projects’ implementation process confirmed that there was no significant difference between the five-year plans. This implied that no improvement occurred despite attempts and measures to improve this programme. The project implementation process involved four stages: (a) preparation and planning; (b) resourcing; (c) construction; and, (d) completion. Delays occurred because the longest time was spent on the preparation and planning stage. Delays at this stage caused further delays in other stages. Target shortfall occurred because of implementation delays where the mean project completion time was more than five-years and a large number of projects were completed outside the intended plan.

There were also relationships between the programme funding and its performance. Delays in implementing the projects caused cost increases and further cost increases when projects were not completed within the five-year plan. Delays in starting the construction rendered the amount of funding allocated no longer adequate to cover the total project cost. Correct estimation and proper project preparation were important for building houses within the five-year plan and within the funding provided. Inadequate funding was made to this programme and as a result the states had to meet project costs from their own funding. The project cost also increased as time elapsed from 1976 to 1990 during the three five-year planning periods.

This study validated the “bottom up” perspective of program implementation where it confirmed that there was a relationship between the interactions of actors and agencies at the bottom and the programme performance.

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Ahmad Salludin Yeop Mat Dali,
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List of Abbreviations

1MP	First Malaysia Plan
2MP	Second Malaysia Plan
3MP	Third Malaysia Plan
4MP	Fourth Malaysia Plan
5MP	Fifth Malaysia Plan
6MP	Sixth Malaysia Plan
7MP	Seventh Malaysia Plan
EDA	Economic Development Administration (USA)
EPF	Employment Provident Funds, (Malaysia)
CPF	Central Provident Funds, (Singapore)
EPU	Economic Planning Unit
MHLG	Ministry of Housing and Local Government
NEP	New Economic Policy
NHD	National Housing Department
PLCHP	Public Low-Cost Housing Programme
PWD	Public Works Department
SEDC	State Economic Development Corporation
SHD	State's Housing Department
SLCHP	Special Low-Cost Housing Programme
TCOHL	Technical Committee of Housing Loan

Chapter One:

INTRODUCTION AND BACKGROUND

Introduction

The housing objective in Malaysia is to provide every citizen access to housing, with a special emphasis on the lower income groups. The Public Low Cost Housing Programme (PLCHP) is one of the efforts to house the lower income groups and has been implemented through the co-operation of the federal and state governments and their organisations. The programme caters for broad categories of lower income groups in urban and rural areas to achieve the goal of supplying houses of an adequate standard and at an affordable price to lower income groups in large quantities, at a cheaper and a faster rate. The government has made several improvements to the programme such as attempts to expedite the implementation process, increase programme funding, improving monitoring and enhancing relationships between the two levels of government. Despite these attempts, the programme has continued to face problems of unmet targets; failing to achieve the targets in each five-year development plans.

This study investigates the factors limiting the programme's performance, by analysing the time taken in all stages of implementing the programme and the provision of funding, and by comparing the programme's performance across five-year development plans, states and implementing agencies. In short, this study investigates why there was a gap between policy intention and programme outcome. In addition, the study also describes prominent features of the programme's components and also provides a detailed account of the public housing implementation process.

Research Context

Housing is one of the basic fundamental human needs. It is a form of protection against a hostile nature, a means through which to express individual and cultural values, and a way to produce, consume, and accumulate capital (Patton,1988; p.xiii). Housing is also related the cultivation and preparation of food, the clothing of oneself, the care of one's body, the procreation and nurture of children, and the sheltering of these activities (Turner, 1972; p.153). Housing is regarded not only in terms of personal meaning but is also an expression of social order (Duncan, 1981). Housing reflects the common purposes for which it is put to use: working, eating, sleeping, childrearing and leisure, although diversified in its forms from the simple mud-brick, thatch roof habitations in Africa, the flat-roof dwellings in Middle East, to the pitch roof and stilt-supported buildings in Southeast Asia (Grimes,1976; p.3). Despite this fundamental need, millions of people are ill housed or not housed at all, particularly in the developing or Third World countries (Patton,1988; p.3).

There are three major factors associated with the housing shortage in developing countries. Firstly, as a result of rapid population growth, because of sustained fertility and decreased mortality (Dwyer,1974,p.11). Secondly, because of in-migration to urban centres by rural populations in search of employment and better living conditions (Dwyer, 1975; Payne, 1977; Drakakis-Smith, 1981; Reitsma and Kleinpening, 1985). Finally, where there is a gap between income and affordable house prices: this impedes the poor from obtaining a decent housing, as described by Grime as “... *inadequacy of incomes of large numbers of households to pay for the housing that is currently being produced*” (1976; p.63). Abrams states that “*the gap between shelter cost and income* ” is an obstacle in progress in meeting housing need (1966; p. 52).

Grimes (1976) identified four factors dominating the housing situation in most cities: income (listed as the most important), city size, rate of urban population growth, and the policy context of the housing provision. These factors produce wide diversity in the options open to developing countries in treating their housing problems. Abrams (1969) proposed four approaches to answer housing shortages: the construction of public housing; urban renewal; development of new towns; and, dispersal of industries.

Grimes (1976) on the other hand suggested three approaches: sites and services, co-operative housing, and public housing. Of these, two popular approaches widely discussed in the literature to house low income people are: first, the construction of public housing through the major roles of public agency; second, sites and services and squatter upgrading programmes, in the case where labour is severely under-used and incomes are low.

Rapid population growth far outstrips the ability of the governments of developing countries to provide housing, community services, and even basic infrastructure facilities to low income groups, thus preventing access to decent housing. Drakakis-Smith (1981) noted that government housing was limited because some have been wasted on expensive projects designed to impress electorates rather than meet any real needs (Drakakis-Smith, 1981; p.45). The public housing approach has been criticised for imposing modern high standards, Western planning principles and the bureaucrats biased values which alienate lower income group. Rents are also relatively high because of additional electricity and water bills. In addition, extra transportation costs were often inflicted on the occupants because some of the projects were located in the urban periphery, a long way from their places of work. However, two newly industrialised countries, Singapore and Hong Kong have successfully implemented their public housing programme. Moreover, a study by Wagelin (1978) on squatters' rehousing schemes in Kuala Lumpur concluded that public housing approach can provide a better overall living environment for the target group.

To meet the housing needs, much of housing is built outside formal housing production systems through spontaneous development in urban areas in the form known as 'squatter housing', 'illegal development', 'unauthorised housing' or 'spontaneous shelter' (Patton, 1988). These spontaneous settlements are typically below minimal standards of health and safety (Dwyer, 1974; p.212; Laquin, 1983). They grow in size and are difficult to improve, let alone remove (Jogensen, 1977; p.29). The incompetence of government has resulted in spontaneous shelters growing more rapidly than public housing. Governments' financial capacities have become major constraints to proposals to overcome urban housing problems (Choguill, 1988; p.29). In these circumstances, self help buildings such as sites and services and the

upgrading of squatters accommodation are the best possible solutions to the housing problems, as advocated by Turner.

Meeting housing problems justifies intervention by the government. Leaving the problem entirely to market forces is not only fallacious, but also disastrous because private developers are attracted to the lucrative housing market of those who have the ability to pay. In contrast to this belief, intervention is seen to *"...affect the price of housing: regulation, taxes, and subsidies are most common interventions. Each intervention has costs and benefits which are not often explicitly estimated."* (Malpezzi, 1991; p.209). To Grimes, the interaction between land availability and servicing and the provision of housing makes a high degree of government involvement inevitable, even if most of the housing market remains in the hands of private enterprise (Grimes, 1976; p. 91).

In Malaysia too, the Public Low Cost Housing Programme (PLCHP) is one of several housing programmes formulated by the government to accomplish the aim of its housing policy to provide all Malaysians, especially the lower income groups, access to adequate and affordable housing. PLCHP was formulated to fulfil the objective of supplying affordable houses of adequate standards to lower income groups in large quantities, cheaply and quickly. In addition, high expectations were imposed on this programme as a means of solving the housing problems of lower income groups. It was expected to fulfil the multi-facet objectives of uplifting occupants to better living environments, enhancing national unity, providing opportunities to own property and gaining political support.

In spite of the well committed intentions to provide affordable housing to lower income groups, the programme has not succeeded in reaching its objective of constructing cheap houses in large quantities quickly. Although, the programme has been in existence for a long time, still faces many implementation problems. The existence of a gap between policy intention, programme implementation and target achievement is the crux of the problem. Despite efforts by the government to solve these, targets were not met.

PUBLIC LOW COST HOUSING PROGRAMME (PLCHP)

Public Low Cost Housing Programme (PLCHP) is defined as the construction of low-cost houses involving co-operation between federal and state governments. The federal government provides loans to state governments to finance this programme. The state governments construct housing under this programme with the technical assistance provided by either the National Housing Department, the State Economic Development Corporations, the Public Works Department or any other agencies chosen by the state. The states may sell or rent these houses with option to purchase to eligible buyers or occupants from the low-income groups. The state re-lends the funds from the federal government to buyers at the rate of 5.5% per annum with a maximum repayment period of 30 years. The selling price is determined by the federal government at not more than M\$25,000. The low income groups defined by the government are those with total household income of not more than M750.00 in 1995.

PLCHP was the major housing programme for lower income groups before the government introduced a new policy by imposing on private developers the duty to share the responsibility for building low cost housing for lower income groups in the early 1970's. This programme, which began in 1950, had first concentrated its efforts only in urban areas. The original intention was to assist lower income people to purchase or rent houses (Jegatheesan, 1979; p.24.). During the 1960's it had become an instrument in the clearance of urban slums and squatters, and provided a rehousing programme for the urban poor (Malaysia, 1971; p.257). Then in 1968 its emphasis was shifted to rural areas and urban fringes. The government endorsed this programme as an instrument to provide housing "...within the means of the poor." (Malaysia, 1976; p.330). Currently the programme operates in urban, urban fringe and rural areas, especially in areas where low cost housing is not provided by the private sector. Up to 1995, 182,533 houses had been constructed under this programme.

Programme Performance

In each of the five-year plans there was a substantial programme shortfall. The programme shortfall is viewed in terms of the dwelling target and underspend. The shortfall in dwelling is the difference between the number of houses completed at the

end of the five year plan and the original intended target at the beginning of the five-year plan. The financial underspend is the difference between the actual amount of expenditure, incurred compared with the funds allocated in each of the plans. In other words, shortfall means the number of houses that were unable to be built and the amount of money that was not spent.

Target Shortfall

The performance of PLCHP between 1956-1995 is shown in Table 1.1 which illustrates the housing targets and number of houses completed under several five-year development plans. The number of houses targeted exhibits a sharp increase from 35,000 in the First Malaysia Plan (1966-70). Then it reached a peak of 176,500 in the Fourth Malaysia Plan (1981-85), then there was a sudden drop to 45,800 during the Fifth Malaysia Plan (1986-90) and finally figures fell to a mere 40,000 for the Sixth Malaysia Plan (1991-95). In contrast, the trend of houses completed in each plan shows a slightly different pattern where there was a rapid increase from merely 2,983 during 1956-60's period to 8,400 during the Second Malaya Plan (1961-65) and 22,522 during 1966 to 1970; then there was a sudden decline by nearly a half in the Second Malaysia Plan (1971-75) ⁽¹⁾. Later, the number of houses completed in 3MP and 4MP increased to 26,250 and 72,308 respectively. Finally in 5MP it dropped to 26,172. Analysis of the table concludes the existence of a considerable gap of unmet targets in terms of the difference between the target number of units and the number of houses completed in each plan.

¹ Less emphasis was given to public housing during Second Malaysia Plan (2MP) where lesser amounts of funds were allocated to finance the programme compared to previous First Malaysia Plan (1MP). At this time also the Housing Trust diminished in its role due to internal problems. Large number of houses under this programme were built by the newly formed State Economic Development Corporations. Other factors contributed to this problem because 2MP was only passed by Malaysian Parliament in late 1971, hence physical implementation of projects could only commence in 1972 after the land survey, site and soil investigation, layout and design had been completed. There were also elements of uncertainty as to which authority responsible for approving the new public housing scheme because of the adverse criticism that had been made to the Ministry of Local Government and Housing in the implementation of this programme in the 1MP. This programme was transferred under the charge of Deputy Prime Minister which was put under the Ministry of Home Affairs. In mid 1973 the programme was transferred back to the Ministry of Local Government and Housing.

The highest percentage of target achievement under this programme was 64% during the First Malaysia Plan (1966-70) where 22,522 houses were built out of targeted 35,000 units. Then 57% was achieved during the Fifth Malaysia Plan (1986-1990). Amongst the lowest achievement were 26% and 28%, occurred in Sixth Malaysia Plan (1991-1995) and Second Malaysia Plan (1971-1975) respectively.

The targeted number of houses on each five-year plan consisted of houses carried over from previous plan and also new houses formulated for the five-year plan. For example, during 3MP the total; number of houses intended were 73,500 that comprised of 14,581 houses (20%) carried over from 2MP and 58,919 newly formulated houses (80%) within the plan. Out of the target 73,500 houses only 26,250 houses (36%) completed within the 3MP, comprised of 7,454 carried over houses and 14,945 houses formulated for the plan. The other 46,750 houses (64%) were not completed within the plan, where 44,783 houses (60%) were carried forward to 4MP and the other 1,967 houses (4%) were cancelled.

Table 1.1:
PERFORMANCE OF THE PUBLIC LOW COST HOUSING PROGRAMME
UNDER "FIVE-YEAR" PLANS 1956-1995

Five-year Plan Period	Number of Houses Targeted	Number of Houses Completed	Percentage of Target Achieved	Number of Houses Not Completed	Percentage of Target Shortfall
1956-1960	n.a.	2,983	n.a.	n.a.	n.a.
1961-1965	n.a.	8,400	n.a.	n.a.	n.a.
1966-1970	35,000	22,522	64%	12,478	36%
1971-1975	48,120	13,244	28%	34,876	72%
1976-1980	73,500	26,250	36%	47,250	64%
1981-1985	176,500	72,308	41%	104,192	59%
1986-1990	45,800	26,172	57%	19,628	43%
1991-1995	40,000	10,343*	26%*	29,657*	74%*

Notes:

n.a.= not available

* These figures were based on the progress of this programme up to June 1994.

1. Information on the number of houses targeted and completed in this Table 1.1 was obtained from various five-year plan documents. These figures differed slightly when analysing a more detailed performance of this programme by the states in Table 1.3 and Chapter Five. This variation occurred because data analysis in Table 1.3 and Chapter Five was based on the 'Fourth Quarterly Reports' end of 1980, 1985 and 1990 prepared by the Ministry of Housing and Local Government (MHLG) Malaysia for this programme.

2. The focus of this programme during 2MP (1966-1970) was on the urban areas. Thus, nearly half of the 22,522 houses built in 2MP were flats. (Malaysia, 1971; p.258).

Sources:

1. N.Jegatheesan, 1979; p.26
2. Malaysia, 1967; p.332
3. Malaysia, 1971; p.258
4. Malaysia, 1981; p.360
5. Malaysia, 1986; p.522, 528, 530
6. Malaysia, 1991; p.365, 384

Financial Shortfall

Table 1.2 provides information on the financial shortfall for the programme between 1966 to 1990. This table verifies that the amount of expenditure in each of the plan period was lower than the amount of funds allocated because the number of houses completed was lower than the number targeted

The percentage of financial shortfall between the plans varied between 3% to 50%. A financial shortfall of 47% occurred during the First Malaysia Plan (1966-1970) and the Second Malaysia Plan (1971-1975). In the Third Malaysia Plan (1976-1980) there was a financial shortfall of 31% and in the Fourth Malaysia Plan (1981-1985) it was only 3%. Finally in the Fifth Malaysia Plan (1986-1990) the financial shortfall was 50%.

Information on this financial shortfall implies that, although funds were available for the programme, they were not all spent because the number of houses completed were lower than intended. There were also other problems of withdrawing the funds from the federal government and delays as the result of procedures involved.

Comparing between Table 1.1. and 1.2 also indicates that, the target shortfall was bigger than the financial shortfall. This implies that it was difficult to achieve the pre-determined housing target and also difficult to utilise the funds allocated. Although the peak of this programme occurred during the 4MP period (1981-85) where about 97% of total allocation was spent, only 41% of the housing target was achieved. This occurred because a large amount of the funds allocated in the 4MP were utilised for the uncompleted and on-going projects approved in earlier plan periods. Increased of project costs as the result of inflation was also associated to bigger amount of funding utilised.

Table 1.2 :

PROGRAMME' FINANCIAL SHORTFALLS BETWEEN 1966-1990

Plan Period	Funds Allocated (million)	Funds Utilised (million)	Funds Utilised (percentage)	Financial Shortfall (percentage)
First Malaysia Plan (1966-1970)	M\$188.1	M\$99.79	53%	47%
Second Malaysia Plan (1971-1975)	M\$171.9	M\$91.19	53%	47%
Third Malaysia Plan (1976-1980)	M\$640.09	M\$441.56	69%	31%
Fourth Malaysia Plan (1981-1985)	M\$1,712.2	M\$1,659.06	97%	3%
Fifth Malaysia Plan (1986-1990)	M\$691.79	M\$345.0	50%	50%

Sources:

Various Five-year Malaysia Plan Documents 1966 to 1991.

Financial and target shortfall have become common in the implementation of public programmes in Malaysia (Davies, 1981; p.47). This target shortfall similarly, occurred to PLCHP. Several reasons were held responsible for problems, such as delays in sites acquisition, delays in squatter evictions, contractors failure to complete projects (Endan, 1984; p.71), several technical problems (Alithambi, 1979; p.52) and many others. Basically these problems were not new, they had been in existence in the sixties (Housing Trust, 1967) and still exist in the nineties (MHLG, 1991a).

The performance of this programme varied from one plan to another. For example, although the number of houses completed during 1976-80 (26,250 units) were twice the number of houses completed in the previous plan (1971-75), the amount of expenditure spent was five time higher and the amount of funds allocated was almost four times as great. This occurred because of high inflation rates of 10.3% in 1973 and 17.4% in 1974. Two plan periods showed an almost similar number of houses completed, 26,250 units during the 1976-80 and 26,172 units during 1986-80.

Table 1.3 provides detailed information on the number of houses targeted and built in each state between 1976 and 1990, during the 3MP, 4MP and 5MP. The table confirms that the programme has never achieved its target; there is an evident gap between the number of houses targeted and the houses completed in each plan and in each state. By the end of each five-year plan, the number of houses completed were less than the number of houses originally intended. Variable performance occurred between the states. Some states have a poor performance, while others have a slightly better performance. For example, of the highest number of houses targeted for the Third and Fourth Malaysia Plan, 14,194 and 46,227 respectively, in Wilayah Persekutuan only 3,718 (26%) and 16,375 (35%) were completed. Another example is from the Fifth Malaysia Plan where Pahang and Johor have among the highest housing target of 8,813 and 7,114 respectively, however, the number of houses completed were 5,772 (65%) and 4,560 (64%).

Increased Allocation

Increased financial allocation to the programme was one of the attempts to solve the implementation problem: "*.. increased financial allocations being provided for the programme in the Plan, the implementation capacity of the States will be strengthened and expanded so as to meet their respective targets.*" (Malaysia, 1976; p.337). For example, during the Third Malaysia Plan (1976-80) a substantial increase in allocation was made, when M\$640.9 million was provided compared to only M\$171.9 million, for the Second Malaysia Plan (1971-1975). Although this was an increased of 6.5 times, the amount only increased 2.6 times in 1971's price. Also the number of houses completed in 3MP were only about twice of the previous plan. This implied that inflation had occurred during 3MP and caused increased in project costs.

Attempts to alleviate target shortfalls made through increased amount of allocations. In 3MP, funds were increased about 35% from \$483,730,000 to \$652,885,563. Then in 4MP, funds increased of 62% from M\$1,026 million to M\$2,694 million as shown in Table 1.4. Despite increased in funding, problems still persisted because:-

Table 1.3:

**PERFORMANCE OF PUBLIC LOW COST HOUSING PROGRAMME
ACCORDING TO STATES DURING 1976-1990**

States	Third Malaysia Plan		Fourth Malaysia Plan		Fifth Malaysia Plan	
	Target	Completed	Target	Completed	Target	Completed
Johor	10,693	2,833	22,896	11,977	7,114	4,560
Kedah	4,374	1,757	7,681	5,835	1,233	1,021
Kelantan	1,497	141	6,172	2,699	3,072	1,180
Melaka	3,514	763	5,657	3,936	1,087	757
N.Sembilan	4,369	1,987	8,824	4,932	3,979	2,185
Pahang	5,894	1,392	12,572	3,320	8,813	5,772
Perak	3,310	1,520	16,897	3,074	5,775	3,839
Perlis	1,875	210	2,390	2,120	441	365
P.Pinang	3,870	982	6,983	4,397	1,065	615
Selangor	10,635	4,264	20,234	6,260	3,998	2,162
Trengganu	2,391	1,015	6,103	3,804	1,333	290
Wilayah	14,194	3,718	46,227	16,735	1,207	1,000
Peninsular	66,616	20,582	162,726	69,091	39,117	23,746
Sabah	2,160	1,284	6,983	910	2,895	1,734
Sarawak	4,730	559	6,793	3,257	3,788	692
Malaysia	73,506	22,425⁽²⁾	176,502	73,258⁽³⁾	45,800	26,172

Source:

Compiled from various PLCHP Progress Reports by the Ministry of Housing and Local Government, Malaysia between 1980 and 1991.

² There is a slight variation between figures reported in the five-year plan's document for houses completed by the end of the Third Malaysia Plan and the detailed records at the Ministry of Housing and Local Government. The number of houses completed in 3MP as appeared in Table 1.1. were 26,250 while detailed breakdown for all the states by the end of the plan only showed 22,425 as in the Table 1.3 above.

³ There is a slight variation between figures reported in the five-year plan's document for Fourth Malaysia Plan and the detailed records according to states by the Ministry of Housing and Local Government. The number of houses completed in 4MP as appeared in Table 1.1. were 72,308, used the Fourth Malaysia Plan's document. While the detailed breakdown in this Table 1.3. based on the records prepared by MHLG at the end of five-year plan.

- The increased total allocation was made to cater for the increased number of housing targets (MHLG, 1991a, 1983, 1978).
- Inadequate allocation was made to each project. The allocation provided to finance each project was lower than the actual project cost. The arrangement for the states' government to top up additional costs for land and infrastructure did not seem to be functioning (MHLG, 1991a).
- The similar lengthy process of programme resourcing and process of allocation withdrawal were unchanged. The peculiar problems of difficult access and utilisation of funds continued to exist (MHLG, 1991a, Tan, 1983; p.76).

Table 1.4 :

**ALLOCATION OF FUNDING FOR THE PUBLIC LOW COST HOUSING
PROGRAMME IN THE THIRD AND FOURTH MALAYSIA PLAN 1976-1980
AND 1981-1985**

States	Third Malaysia Plan 1976-1980		Fourth Malaysia Plan 1981-1985	
	Original Allocation	Revised Allocation	Original Allocation	Revised Allocation
Johor	\$ 94,273,530	\$ 94,273,530	\$115,780,000	\$334,872,709
Kedah	\$ 52,242,000	\$ 52,242,00	\$ 78,100,000	\$115,590,786
Kelantan	\$ 11,227,000	\$ 12,863,000	\$ 40,100,000	\$ 97,769,143
Melaka	\$ 17,060,000	\$ 27,713,575	\$ 76,200,000	\$ 76,339,710
Negeri Sembilan	\$ 18,170,000	\$ 34,473,756	\$ 75,400,000	\$ 150,542,099
Pahang	\$ 43,274,000	\$ 45,824,124	\$ 68,540,000	\$ 207,447,330
Perak	\$ 24,543,000	\$ 26,863,875	\$ 85,400,000	\$ 288,081,535
Perlis	\$ 13,570,000	\$ 16,266,500	\$ 13,400,000	\$ 25,798,000
Pulau Pinang	\$ 34,442,000	\$ 39,674,400	\$ 37,300,000	\$ 85,978,000
Sabah	\$ 12,630,000	\$ 22,109,000	\$ 34,100,000	\$ 89,396,000
Sarawak	\$ 35,000,000	\$ 38,415,520	\$ 57,100,000	\$ 103,473,162
Selangor	\$ 43,873,000	\$ 67,889,640	\$ 105,980,000	\$ 318,051,203
Trengganu	\$ 13,760,000	\$ 17,933,940	\$ 37,600,000	\$ 96,611,266
Federal Territory	\$ 103,100,000	\$ 156,342,703	\$ 201,000,000	\$ 704,600,000
Total	\$ 483,730,000	\$652,885,563	\$1,026,000,000	\$ 2,694,751,035

Source:

Ministry of Housing and Local Government, Malaysia.

A review of several government reports (published and unpublished) was made by the author and several factors can be highlighted as being responsible for the problem of target shortfall. The factors are:-

- **Implementation Co-ordination:** intergovernmental and interdepartmental co-ordination stressed to ensure proper co-ordination and to ensure that every agency played its role meaningfully and adequately in fulfilling national objectives (MHLG, 1993; p. 7-7; MHLG, 1979; ; p.12).
- **Implementation capacity:** appears to be the cause of target and financial shortfall (MHLG, 1993; p. 7-6; Malaysia, 1976; p.335). Implementation was stressed in several official documents.
- **Land problems:** The main shortfall in low cost housing target was reflected in problems associated with “...*inadequate capacity, the protracted process in obtaining suitable land*” and delays in providing complementary infrastructure (Malaysia, 1979, p.211). Problem associated with delays in providing suitable sites for the programme has long been recognised in the past, and the blame was put on the state governments (MHLG, 1993; p. 7-6; MHLG, 1979; ; p.12).

Significance of the Problem

Many criticisms were made of the problems of programme under-achievement and variable performance. Several factors were said to account for this problem but having examined various reports, these problems appear to be persistent and have occurred repeatedly in the past. Although the modifications were made to the implementation mechanisms, problems of under-achievement occurred repeatedly in every five-year plan. There must be an explanation for the problem of the programme's consistent under-achievement.

The fundamental question to ask is "How appropriate was the combination of resources, the implementation process and the implementation mechanism chosen to achieve the objective of this programme?" Were the allocation provided sufficient to finance the project? Were the funds available when needed? How easy was it to withdraw loans? How many steps had to be followed and how quickly was the loan available? These are some of the questions that need to be answered. Although this

programme was assumed to be well equipped with resources, facilities and suitable government mechanisms, yet it is still produced an inadequate output.

In short, the question of how the combination of resources, activities, bureaucratic procedures, administrative structure and implementation mechanism in this programme led to the under achievement of programme's objectives measured in term of time, cost and quantity has to be considered.

PROBLEM STATEMENT

The formulation of the public low cost housing programme and the decision to implement it through government mechanisms was made on the assumption a government own programme had several advantages. First, the government had direct control over the project in terms of number of houses to be built, where to build them and had opportunity to operate in areas where low cost housing is unattractive to the private sector. Second, the government could provide cheaper and affordable houses, because the government is capable of providing financing, land and other resources. Third, the government could also devise an implementation mechanism by creating a supporting agency or by using existing agencies to facilitate such a programme. Finally, since the implementation of this programme uses governmental agencies and administrative arrangements, it would gain all the necessary support, reduce unnecessary bureaucratic procedures and as a consequence shorten the overall housing delivery process.

However, the structure of government which consists of federal and state government is characterised by dispersed power, differentiation of functions and responsibilities, and varied resources. To accommodate and ensure the success of a programme like this requires a process of assembling power, responsibilities and resources between the two levels of government to achieve an outcome. The federal government is in control of finance and give final approval to the list of housing projects for this programme. On the other hand it is state governments that provide state land and are also empowered to acquire private land for housing projects.

The programme also has to go through an implementation process involving several agencies who co-ordinate, supervise, approve, control, regulate and finance the programme. The longer the implementation process imposed, the slower the pace towards the completion of programme is likely to be.

Several agencies are in control of resources, information or the granting of approvals. All these influence the performance of the programme. Policy implementation involves an assembly process of different parts and the control of the assembly process. It involves assembling numerous and diverse programme elements which are in hands of various parties that are independent of each other into a whole (Bardach, 1977).

To facilitate the implementation of this programme, a technical agency was created by the federal government to assist in its execution. Besides employing the National Housing Department, state governments may also appoint other agencies to assist them. The National Housing Department has the specialised function of assisting state governments to build low cost houses, whereas other agencies are the general housing development agencies and also non housing agencies. The study investigates the achievements of each of by the programme's implementing agencies.

Programme implementation is also bound by the roles each department has to play and also the departmental rules and procedures. While the implementation mechanism is designed to facilitate the programme, the involvement of several departments can contribute to a slowness in implementation. The environment within which the programme operates can produce excessive control. Although the programme has been in operation for more than 40 years, the signs of strain and stress are reflected by the problem of under-achievement and shortfall.

Therefore the statement of problem for this research was that inadequate funding,⁽⁴⁾ lengthy implementation process⁽⁵⁾ and inefficient implementation

⁴. Resource include funding. Inconsistency of resource is insufficiency of funds allocated for each project of which the cost estimate was usually lower than actual construction cost. Inadequate and rather ad-hoc information available during project formulation. Unavailability of land or varied status of land for the programme.

mechanisms⁽⁶⁾ have caused under-achievement of the public low cost housing programme, amongst states and periods of implementation.

The aim of this study is then to seek an explanation of why the output of the programme did not produce the intended result. Searching through the programme output between 1970 and 1990 has revealed that there were areas where the programme worked very well, featured by "*period of implementation*" and "*location of implementation*" (states). These two factors suggested the existence of variable programme performance, which implied that programme output was better in certain environments. Investigations must be carried out and comparisons made in order to elucidate and understand the internal dynamics of the programme operations which are related to good and poor performance.

OBJECTIVE OF THE RESEARCH

The objective of the research is to find explanations for the phenomenon of target under-achievement and the variable performance of the public low cost housing programme in Malaysia amongst states and periods of implementation. Specifically, the objectives of this study are to achieve the following:-

1. An examination into factors which account for unsatisfactory programme achievement.

⁵. The implementation process include the necessary steps, stages and procedures required to execute the public low cost housing programme, starting with the formulation of a projects list in each state until its completion. Four stages are mentioned in this paper; the project formulation stage, the resourcing stage, the construction stage and the completion stage.

⁶. Implementation mechanisms means administrative arrangement and organisational structure involved in the implementation of projects. The focus is on the choice of administrative arrangements to implement the project which involves the state-federal relationship, division of responsibilities and which agency is to provide technical assistance (the federal's National Housing Department or the state own agencies such as the State Economic Development Corporations and the Public Works Departments)

2. An investigation of major factors expediting and limiting the programme achievement. The aim is to identify factors that worked and those that did not work during the process of programme implementation.
3. A description of prominent features of the programme components and a detailed account of its implementation process.
4. To attain relevant findings contributing to the refinement and improvement of the public low-cost housing policy for lower income people in Malaysia more specifically, and in general to provide lessons to enable policy makers, planners and implementers to gain insight into past mistakes and to avoid continuing mistakes.

RESEARCH METHODOLOGY

This study used in quantitative and qualitative methods to gather information. The first stage used a quantitative approach by collecting information on 215 representative projects from the programme's records. The second stage was a qualitative approach, where semi-structured interviews were carried out with those involved in the programme's implementation on 24 projects.

The quantitative approach was used to analyse the general pattern of the programme and to gain a general overview before selecting cases for further detailed studies. The qualitative research provided rich data on the process of policy implementation that was not captured by the quantitative approach. Since the quantitative approach collects data based on several preconceptions and intervention at certain points, it was unable to look into the whole implementation process. The qualitative approach has provided information based on the perspectives of programme participants and relevant actors.

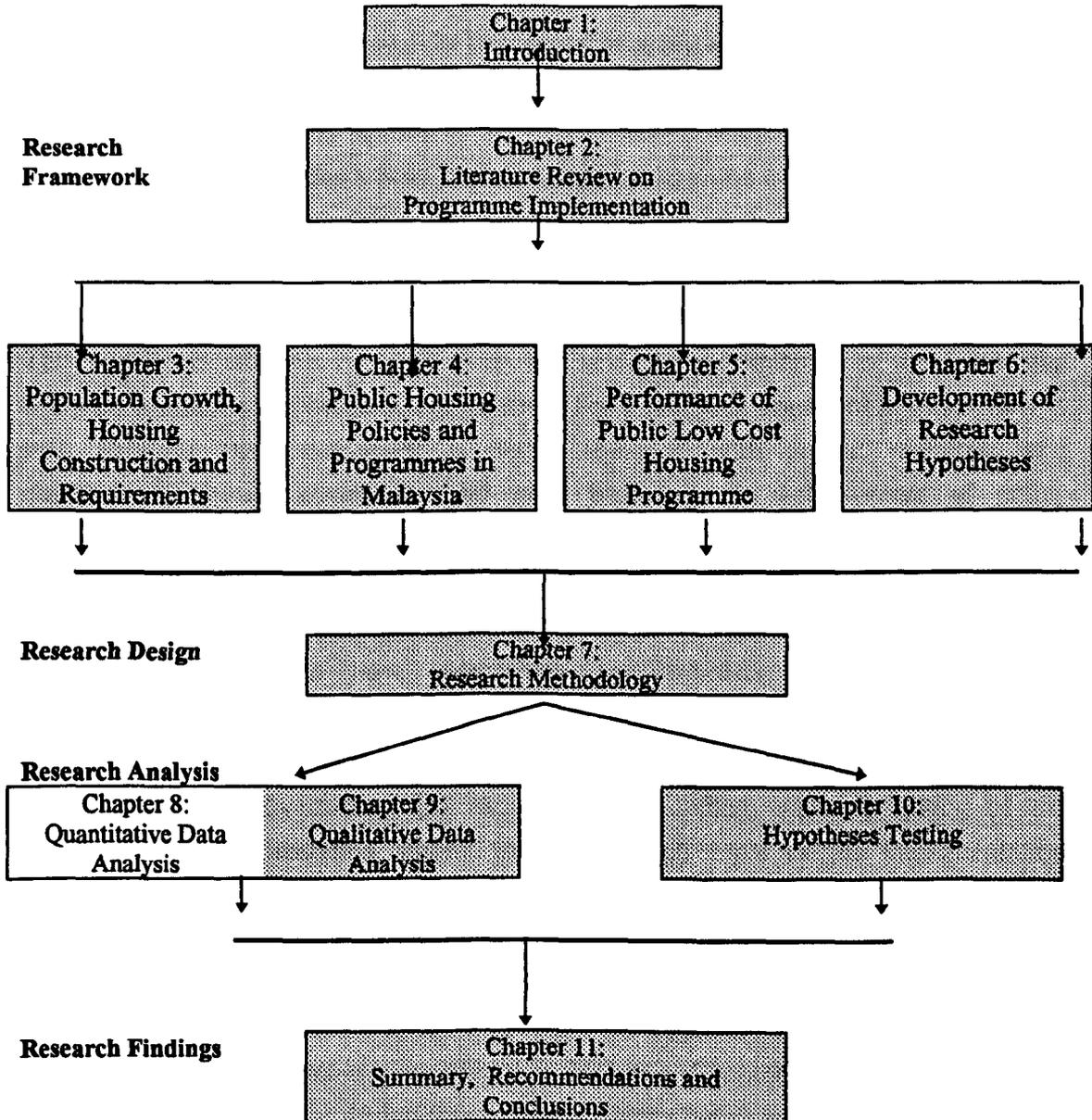
During the first stage, 215 projects were selected through disproportionate stratified random sampling from a sampling frame of a total of 624 projects in the programme. These were projects formulated for the three development plans between

1976 and 1990 in seven states of West Malaysia. These projects were stratified into four categories; the 'implementation period', 'states', 'implementing agency' and 'status of completion'. The seven states were selected to enable the researcher to make comparisons of the three types of implementing agencies engaged in the programme. This study aimed to discover the general pattern and degree of relationship between selected variables by statistical tests.

Data was collected from programme records, files and documents which are available from the Ministry of Housing and Local Government, the Housing Division of the state governments and the implementing agencies. These files provided information about the projects' progress from inception until completion.

This researcher then conducted a second qualitative stage data collection. The quantitative research in the first stage helped with the choice of projects for a qualitative investigation. Guided interviews were carried out with the aim of providing richness of data, getting the story from the perspective of people involved in the programme on detailed descriptions of programme implementation in greater depth. It provided answers in a qualitative manner to the question of which factors limiting programme achievement.

During the second stage, 24 projects were selected from the 215 projects in stage one by using the contrast sampling method. The selection was based on non-random and purposive sampling. However, certain criteria were set for the selection of cases. The aim was to investigate programme variations across sites, five-year plan periods and implementing agencies. At this stage the focus was on providing detailed descriptions of project implementation and on examining factors expediting and limiting programme performance.

Diagram 1.1. Research Organisation

Thesis Organisation

This thesis is presented in two parts consisting of eleven chapters in total. Part One comprises the main text; the survey of literature, the background on public housing development, the research framework and research design. Part Two is the presentation of data which involves two types of analyses and research findings. The arrangement of this thesis appeared in Diagram 1.1.

Chapter 1 provides a brief overview and background of the study which serve to provide justifications and direction for the research.

Chapter 2, the literature review, examines the field of policy implementation. This represents attempts by researchers and scholars to explain why there is a gap between intentions and outcomes of policies. The underlying argument in this review is that, although the government, is better equipped with power, resources and mechanisms, several constraints still exist hindering the achievement of policy outcomes. This chapter focuses on the emergence of implementation studies with various analyses, frameworks and approaches in explaining why this gap exists. Definitions about implementation and the 'top-down' and 'bottom-up' approaches are highlighted to explain how researchers and scholars have viewed policy implementation. This chapter specifically discusses: (a) pre-conditions to an effective implementation, (b) implementation process and inter-organisational relationships, (c) capability of the government, (d) resources and funding, and (d) linking of the literature on implementation studies to the research topic of the implementation problems of the public low cost housing programme in Malaysia.

Chapter 3 describes population growth, housing construction and housing requirements in Malaysia. Chapter 4 provides an overview of housing policies and programmes for the lower-income groups in Malaysia. Chapter 5 analyses public low-cost housing performance during three five-year plans between 1976 and 1990. These three chapters help to highlight the various forces at work in housing development in Malaysia.

Chapter 6 is explanation of the research hypotheses. Chapter 7 describes the research methodology, which explains the approach used in data collection and data analyses.

Chapters 8, 9 and 10 contain presentation of the quantitative and qualitative data, the results of the analysis of the 215 projects during the first stage data collection and the 24 projects during the second stage data collection.

Chapter 11 concludes and summarises the analyses and results of this study and puts forward recommendations. It closes with an overview of the implications for the policy options to the Malaysian public housing programme.

The data collection for this study was completed in 1994, at the time when a number of important housing policies were formulated and implemented in Malaysia such as 'the fund to accelerate construction of low-cost houses' (FACLCH) with funds of \$1,604 million for low-cost apartments construction in urban areas, a time when the country achieved economic prosperity, and a preference for privatisation and corporatisation policies. This author believes that these will effect and impacts on the future direction of housing development in Malaysia. The writing of this thesis was completed in 1996, when Malaysia entered into its Seventh Malaysia Plan (1996-2000). Although it is unfortunate that an analysis of these important elements could not be incorporated into this research, nevertheless, it is hoped that this study will provide some insights into the future of the approach for housing lower income people.

Chapter Two:

PERSPECTIVES ON POLICY IMPLEMENTATION STUDIES: A LITERATURE REVIEW

INTRODUCTION

This chapter focuses on programme implementation problems faced by governments in delivering products as intended in policy statements. Although governments are equipped with power, organisations, resources and other advantages, the governments also face certain difficulties and other shortcomings in achieving policy outcomes. The literature survey in this chapter highlights the constraints faced by governments from the perspective of policy implementation studies. The underlying argument in this chapter is that shortfalls in the implementation of policy objectives is associated with complex implementation process, related to resources allocation, bureaucratic procedures, inter-governmental relationships and other constraints.

In general, public policy implementation is complex, elusive, confusing, faces many challenges and is bound by many constraints. It has never been as straightforward as it has been thought. The ‘classic’ hierarchical model assumed that implementers are excluded from any significant roles in the policy process; policies are made by a small group of decision-makers and are loyally implemented by subordinate administrators.⁽¹⁾ Witnessed by the failures of many the U.S.A’s public programmes in the 1960s, social scientists attempted to find ways to improve programmes in order to achieve their goals. This caused a shift from the ‘classical’ view of policy process, to an emphasis on what happened to a policy during the implementation process. This process is characterised by inter-relationships between different groups of actors, rather than a straight line process from top to bottom. Inter-organisational relationships are one of the constraints in policy implementation. Public policy is

difficult to implement, although all parties and actors agree on and understand, the aim of the policy, and have decided on the course of action to achieve it. It is even more difficult if objectives are unclear. Implementation difficulties are reflected in signs of stress, strain and underachievement. The implementer however, is tied by bureaucratic norms, practices and procedures which are difficult to change. To deal with this complex phenomenon, this study focuses on the policy implementation approach. This examines the processes of getting inter-organisational sanctions of mobilising resources and of creating implementation structures.

The chapter consists of four sections. Section one highlights the emergence of implementation studies and discusses attempts to explain implementation problems. Section two discusses the two approaches in implementation studies: the 'top-down approach' and the 'bottom-up approach. Next, in section three, there is an analysis of factors affecting implementation performance, such as clear objectives and pre-conditions for effective implementation, lengthy processes and delays, inter-agency relationships, government capability, and funding and resources. Finally, the last section explains the link between this literature review and the problem under study.

THE EMERGENCE OF IMPLEMENTATION STUDIES

During the past two decades, there has been an enormous amount of research on policy implementation. Waves of policy implementation studies emerged in the USA in early 1970 and in Europe during 1980's (Ham and Hill, 1993; p.97). During early work implementation studies, researchers analysed a single case programme, focused on successes and failures of programmes, and derived a pessimistic conclusion about the ability of governments to implement their programmes effectively. Later there was a shift in the approach to one which became more analytical and comparative in perspective. It investigated implementation success across programmes and governmental organisations in terms of specific variables and of conceptual frameworks.

Implementation studies are concerned with activities that take place after policy has been formulated. It is concerned with the issues of putting policies into actions. The studies look into the question of why programme outputs are not achieved, as

originally intended by the policy makers. To a certain extent, the studies are involved with the investigation of what went wrong during the stage between the policy formulation and policy outcome. This has been emphasised by Ham & Hill as follows:-

“The pioneering implementation studies therefore argue that the process of putting policy into action is deserving of study, that it is wrong to take it for granted that this process will be smooth and straightforward. Indeed, we may go further and suggest that in many ways these studies are concerned with the discovery that many things go wrong between policy formulation and output.”
(Ham and Hill, 1993; p.98)

As has been explained in the statement above, policy implementation studies, to a certain extent, focus on programme successes or failures. For example, Larson (1980) analyses causes of programme success and failure. He points out four reasons for failure and suggests responses to each, as follows (Larson, 1980; p.7) :-

- (1) Poor implementation procedures: cause the least amount of failure and can be corrected by the programme alteration.
- (2) Intergovernmental complexity: causes a moderate amount of failure and can be corrected by making changes to interagency relationships and co-ordination efforts.
- (3) Vague and unrealistic goals: a serious programme flaw which requires a complete restructuring of programme direction.
- (4) Changes in the economic environment: a very serious cause of programme failure, which call for programme termination.

Hogwood and Gunn (1984; p.197) put in plain terms that policy failure is the consequence of one or more of the following causes: bad policy execution, bad policy and bad luck. Bad policy execution is related to implementation problems and bad luck is due to external circumstances beyond the control of policy makers or implementers.

Bad policy which is less commonly or less openly stated as a reason for the failure, is due to inadequate information, defective reasoning or unrealistic assumptions.

Lessons from 'Dashed Expectation in Oakland'

Pressman and Wildavsky's (1973) study on *'Implementation'* has been so central to the emerging field of implementation studies, that it marks a starting point for any review of literature on this subject (Nakamura and Smallwood, 1980: p.13.)⁽²⁾ They began their study with the assumption that implementation means "to carry out, accomplish, fulfil, produce, and complete" and scrutinised the efforts of the Economic Development Administration (EDA) to produce jobs for the hard-core unemployed in Oakland, California as an example of policy failure.

This study has set a bench mark for policy implementation studies, due to a lack of similar studies before theirs. The authors claimed that, although everyone was concerned with the inability to implement government programmes, analytical studies on implementation were non-existent. In their words "It must be there; it should be there; but in fact it is not." and "... we have been unable to find any significant analytic work dealing with implementation" (Pressman and Wildavsky, 1973; p.166).⁽³⁾

Pressman and Wildavsky's study (1973) investigated the implementation problem faced by the *Economic Development Administration* (a federal agency), in creating 3,000 jobs amongst minority groups in Oakland. The programme was not successful in achieving its target due to two fundamental reasons: it was beset by numerous implementation problems and was deficient in concept. The programme implementation had to undergo innumerable steps and numerous activities. To overcome the problem they called for simplicity in policy implementation and more directness in method. The logic was: the fewer the steps, the less the disaster. The deficiency in concept was because the government employed faulty economic theory. The solution offered to the economic problem was aimed at the wrong target.

They point out that "The evils that afflicted the EDA program in Oakland were of prosaic and everyday character" and "Failure to recognize that these perfectly

ordinary circumstances present serious obstacles to implementation inhibits learning. If one is always looking for unusual circumstances and dramatic events, he cannot appreciate how difficult it is to make the ordinary happen." (Pressman & Wildavsky, 1973; p.xii). The authors also point out that implementation problems were much discussed but lacked thorough analysis. In this study the main problems were ordinary bureaucratic practices and interorganisational relationships. Ordinary bureaucratic circumstances and practices caused constraints on implementation. For example, like a numerous approvals and clearance points having to be obtained from a variety of participants, the difficulty of complying with agreements after they were reached, and delays due to the processes of going through several steps, all caused constraints . Therefore, the greater the number of clearance points needed, the lower the probability of programme success- they termed this an "implementation deficit."

The problem of 'complexity of joint actions' leads to poor chances of policy implementation. This inspired a number of multi-actor inter-organisation studies (e.g. O'Toole, 1986) and analysis by 'probability theory' to predict implementation success and suggest useful tactical advice for implementers (Bowen, 1982; Alexander, 1989).⁽⁴⁾

The lessons from Oakland highlight a number of barriers to achieving policy objectives. The barriers are: the inter-organisational relationship problems of competing and conflicting programme commitments by parties with a low sense of urgency; the appearance of new and unforeseen participants; the difference of opinion among and within parties about leadership; and, organisation, legal and administrative differences. A host of problems can also be anticipated to effect implementation of programme even if the causal chain is short. These problems are: undue speed or delays; turnover of personnel; vague legislation; severe understaffing; fear of racial tensions; conflict between local and federal agencies; overestimation of the degree of local support. Their study took the prescriptive approach, in which they concluded:-

- 'Implementation should not be divorced from policy', otherwise the programme would fail. Implementation must be conceived as a process part of the whole policy design.

- The policy designer must consider a more direct means of achieving the desired end. The “complexity of joint actions” impaired the implementation process, therefore, multiplicity of decision points and clearances had to be minimised.
- The theory that underlies actions, must be carefully considered.
- Continuity of leadership has significance for successful implementation. High turnover of high powered people at the federal level who designed the policy adversely affect the programme implementation.
- Simplicity in policies is much desired.

The problems perceived with the EDA programme in Oakland were where the programme designers did not have a clear idea of the cause of unemployment. Thus, causal theory to remedy the problem was not made available. The EDA was very experienced in tackling problems in depressed rural areas, but had only little experience in depressed urban neighbourhoods, like Oakland. Meyers views the implementation difficulties in the Oakland case as due to a lack of adequate social theories (Meyers, 1981; p.40).

Attempts to Explain the Implementation Problem

The work of Pressman and Wildavsky’s (1973) not only encouraged the emergence of a distinctive literature on implementation but also the beginnings of an emphasis on implementers as key actors in the policy process. Several other authors also attempted to explain gaps between policy and outcomes. For example, Van Meter and Van Horn (1975), stress the psychological and human factors influencing the implementers’ behaviour. These authors highlight and explore the personal and psychological complexities that influence actors in the implementation arena. They argued that implementers were not ‘faceless automatons’, but participants who play crucial roles in the policy process. Van Meter and Van Horn suggested of a more ambitious framework to studying policy implementation. The framework was drawn from three bodies of literature: the organisation theory, impact studies of public policy

and selected studies of intergovernmental relations. They proposed six ‘clusters of variables’ that shape linkages between policy and performance (see Diagram 2.1). This model specifies relationships between the independent variables and dependent variables and makes the relationships among the independent variables explicit. The six clusters of variables are:-

1. Policy standards and objectives,
2. Policy resources,
3. Inter-organisational communication and enforcement activities,
4. The characteristics of the implementing agencies,
5. Economic, social and political conditions, and
6. The disposition of implementors.

Van Meter and Van Horn stress that the identification of performance indicators is crucial in the analysis of implementation because this assesses the realisation of policy standards and objectives (e.g. the number of jobs created, who were hired, and what public works progress was achieved). The model also stresses the available resources that facilitate the implementation of a policy. The standards and objectives of policies have indirect effects on performance. They argue that the delivery of public services will be influenced by the manner in which standards and objectives facilitate oversight and enforcement. Standards and objectives also have an indirect impact on the disposition of implementors through inter-organisational activities. Implementers’ response to the policy objectives based on their perception and interpretation. This model also presents the relationships between policy resources and three other components of the model: (1) inter-organisational communication and enforcement activities; (2) the characteristics of implementing agencies, and; (3) the economic, social and political conditions. Van Meter and Van Horn also clarify that technical assistance and other services can be provided if pre-determined during the policy decision stage. Also, vigorous enforcement can be carried out by the availability of sufficient resources to support that activity.

McLaughlin (1977), focuses on interpersonal relationships between implementors and policy formulators as the key to programme success. She is concerned with implementors’ receptiveness or lack of receptiveness, to the policy

change. She argues that programmes' successes are influenced by the amount of interest, commitment and support of principal actors.

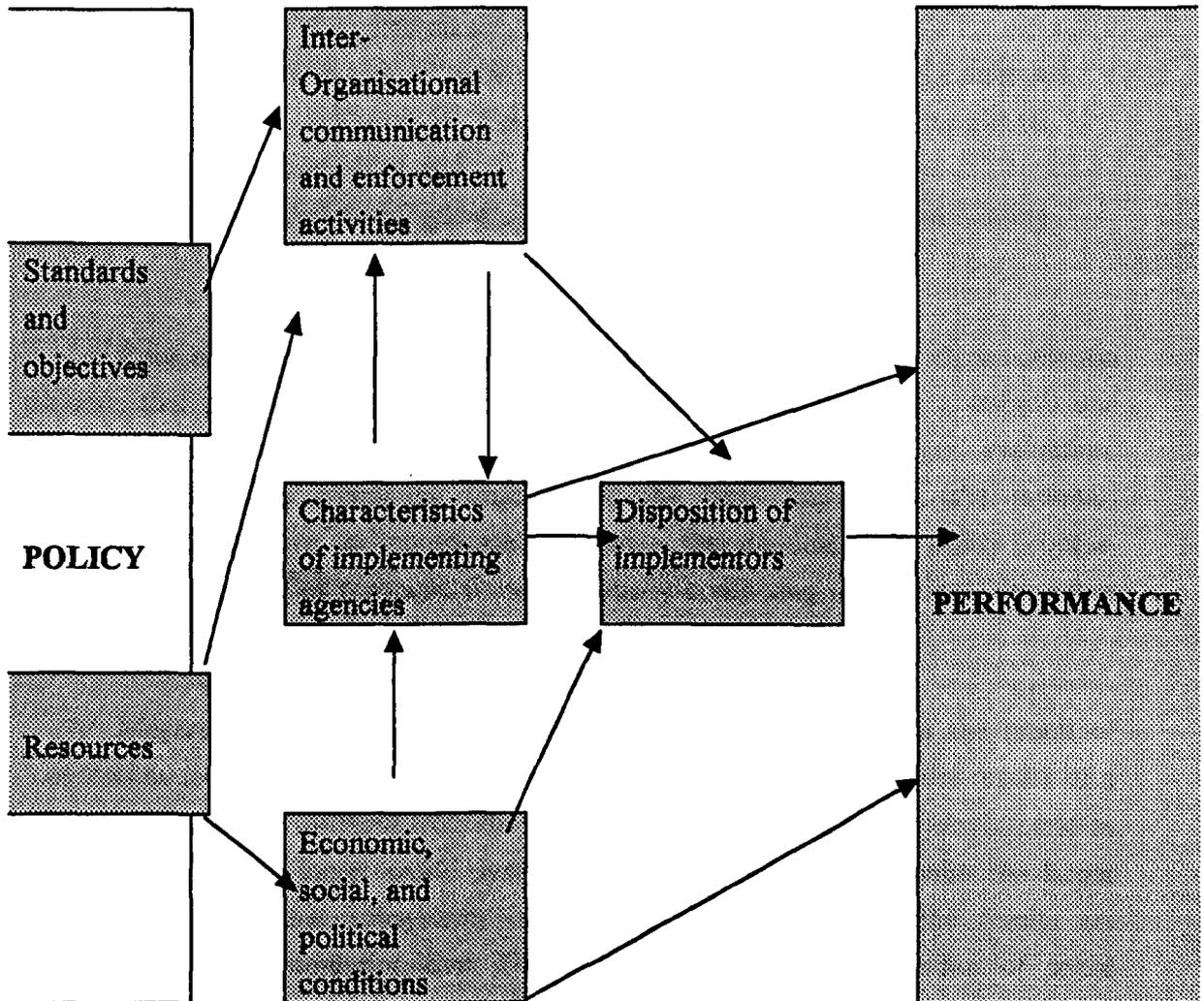


Diagram 2.1: A MODEL OF THE POLICY IMPLEMENTATION PROCESS
PROPOSED BY VAN METER AND VAN HORN (1975)

Source:

Van Meter and Van Horn (1975) "The Policy Implementation Process: Conceptual Framework" *Administration and Society*, Vol. 6 No. 4, February 1975; page 463.

Bardach (1977) classifies and analyses a wide variety of ‘games’ that implementers can play to divert resources, deflect goals, resist initiatives, and impede policies. For example Bardach describes four implementation games that may divert resources:-

- (1) The “Easy Money game” that has an impact on cost escalation but not on the performance.
- (2) The “Budget game” which deflects the policy goals from the intended.
- (3) The “Easy life game”, the way that bureaucrats tailor their works to suit themselves, and
- (4) The “Pork Barrel game”, the way how scarce resources and funding are distributed through political games.

Rein and Rabinovitz, (1978) analyse the looping nature of implementation process, that contrary to belief, the implementation process was not a smooth one sided transition from legislation, to guidelines, and then to auditing and evaluation. They identify three competing imperatives, the legal imperative, the rational-bureaucratic imperative, and consensual imperative, that dominated the policy process. Because of the need to reconcile these potentially conflicting imperatives, the entire implementation process is characterised by a “principle of circularity.”

Meyers (1981; p.37-40) argues that implementation failure is the result of ‘counterintuitive implementation’ design. Counterintuitive means that the results of a programme are quite different from the expected. Meyers views social programmes as subsystems within a larger world system. This subsystems interact with the larger system and with other subsystems in a complex manner where the results are unpredictable and counterintuitive. He summarises that implementation of social programmes are beset by a range of problems: programmes are often not meant seriously; fail to achieve their aims; operate counterintuitively; are counterproductive and tough to implement. He concludes that the root to these problems is poor programme design. In agreement with Pressman and Wildavsky’s valid theory of causation, Meyers believes that :-

‘Designs are poor because we sometimes lack of adequate theories about social causation that would enable us to design effective programs, or we disregard

the theories we do have. As programmers, we often do not know what we are doing. And sometimes we lack the courage, the determination, or the power to design workable programs even when we do have the necessary theory.” (Meyers, 198. , p.41.)⁽⁵⁾

This notion that implementation design has significant relationships with the policy outcomes is also supported by several authors. For example, Hogwood and Gunn (1984, p.198) propose that “...the probability of a successful outcome,...will be increased if thought is given at the policy design stage to potential problems of implementation.” Palumbo and Calista (1987; p.91) clarify that “...a large part of the problem stemmed from poor policy designs rather than implementation.”

Nakamura and Smallwood (1980) study the political dimensions of policy implementation process by analysing the complex types of linkages and interrelationships that characterise the policy system. The rapid growth of case studies on policy implementation, led them to integrate those case studies into a more general conceptual framework. They explain that policy implementation cannot be analysed in isolation. They state that:-

‘Specifically, implementation as a general phenomenon cannot be separated from the process of formulating and evaluating the policies being implemented. This requires consideration of different views of the policy process developed by a diverse group of participants and observers, including policy makers, bureaucrats, and social scientists. In short, our purpose...to explore the politics of policy implementation.’ (Nakamura and Smallwood, 1980; p.viii)

They look at the policy process within sets of functional environments, in which different aspects of the process take place. Within each of these environments there are a variety of arenas where actors interact. The use of environments is to minimise the misleading conception that implementation is characterised by unidirectional phenomenon, as viewed by the classical model. In addition, the concept of environments covers a wide variety of different actors who may attempt to influence the policy process. Anyone may be involved in the policy process and it is not restricted only to governments’ actors.

Nakamura and Smallwood (1980) propose a framework which views the policy process as a system, with a set of interconnected elements, each directly and indirectly related to the others. There are three interrelated functional environments: policy formulation, policy implementation and policy evaluation. Each contains various groups of actors and arenas. Each set of environments is linked to each of the others. They are connected by various communications and compliance linkages. The communication linkages are important between the policy formulation and policy implementation because, for an effective implementation, implementers must know what they are supposed to do through a consistent, clear and accurate policy. Despite the communication linkage, pitfalls and mishaps⁽⁶⁾ may occur because of :-

- (a) garbled messages by senders,
- (b) misinterpretations by receivers, or
- (c) system failure, in terms of transmission breakdowns, overload, "noise", and inadequate follow-through or compliance mechanisms.

Nakamura and Smallwood (1980) point out that a variety of different forces can shape the implementation process once policy has been formulated. They focus on three key variables:

- (1) actors and arena,
- (2) organisational structures and bureaucratic norms, and
- (3) communications networks and compliance mechanisms.

The implementation environment contains a variety of different actors, operating out of divergence arenas, who 'jockey back and forth' in an attempt to influence the course of policy implementation. The task of the formal implementers is to co-ordinate these actors in a way that will lead to successful and effective programme performance. This is considered as a fundamental challenge since the formal implementers do not have the dictatorial authority to order all these diverse actors to conform to their command, especially when the actors are outside of the arenas such as the lobby groups or the press. To obtain co-operation and compliance from others, therefore, implementers must use persuasion, negotiation, and compromise.

The task of implementers is perceived as complex because of internal and external environments. First, implementers have to adjust their implementation responsibilities with internal norms which were influenced by the behaviour within their

internal settings. Second, the complexity due to the growing use of outside intermediaries who are relatively immune to many of the negative sanctions which were traditionally employed in an effort to ensure compliance. This framework concluded that the implementation environment has become one which increasingly involves more political bargaining and other forms of negotiation.

Hood (1976) realises that failure to implement policies is not associated with 'administration', but a result of external conditions, of which, politics is one factor. Hood explained that "...some failures in policy implementation are caused by ...the policies involved are politically too expensive for a given ruling group to judge itself able to afford the price." (Hood, 1976; p.8)

Research on policy implementation thus has progressed substantially since Pressman and Wildavsky's (1973) seminal work. The first generation of implementation studies focused on detailed accounts of how a single decision was carried out and described barriers to policy implementation. Second generation studies were concerned with implementation success and failure. Some have suggested a development into four distinct stages: (1) case studies; (2) the development of a policy implementation framework; (3) application frameworks; and (4) the synthesis and revision (Lester, et.al, 1987; p.201).

Definitions of implementation

Implementation studies are related to acts of carrying out public policies or programmes which normally encounter problems related to interpreting policy intention, interorganisational problems of getting sanctions and co-operation, and measuring policy in terms of unmet objectives, mistakes, delays, deviations and successes or failures. Based on this account, several writers offer definitions of implementation.

Pressman and Wildavsky (1973) propose implementation as a process of forging subsequent links and achieving desired results. Van Horn (1975) enunciated implementation as action towards the achievement of decided objectives. Mazmanian and Sabatier (1983) defined implementation from the point of view of carrying out

basic policy decisions which run through a number of stages. Bardach (1977) defines implementation from a slightly different angle as an assembly process of numerous and diverse programme components in the hands of many. Wolman summarised implementation as:

“In its narrowest definition implementation, as utilized in studies of implementation process, appears to refer primarily to the politics of administration or of the administrative process. In broader usage, implementation may be defined as ‘carrying out’ process or, as Walter Williams (1975) states, ‘the process of trying to move from a decision to program or project operations ‘.’”(1981; p.434).

Implementation according to Pressman and Wildavsky (1973; p.xiii) is "to carry out, accomplish, fulfill, produce, complete ... constitute the ability to achieve the predicted consequences after the initial conditions have been met". Implementation to them is concerned with “that part of a public program following the initial setting of goals, securing of agreement, and commitment of funds” (1973; p.xii). To these authors, policies imply theories. It is causation between initial conditions and future consequences. Policies become programmes when initial conditions are created.

Van Meter and Van Horn stressed actions towards achieving objectives. They defined implementation as action by public or private individuals (or groups) that are directed at the achievement of objectives set forth in prior policy decisions [(Van Meter and Van Horn, 1975; p.445) in Ham & Hill, 1993; p.98] The main question of implementation is to determine whether those services are delivered as intended and whether any changes occurred in the programme structure and operation mandated by the statute. Their definition was based on the distinction between policy-making, policy implementation and the evaluation of policy outcomes (Ham and Hill, 1993: p.98; Nixon, 1980).

To Hogwood and Gunn (1984; p.197), implementation refers to completed action and the absence of action means non-implementation. Non-implementation is where a policy is not put into effect as intended, perhaps because those involved in its execution have been “uncooperative” or “inefficient” or their best effort could not

overcome obstacles to effective implementation over which they had little or no control. Unsuccessful implementation on the other hand is where the policy was carried out in full, but due to unfavourable external circumstances, the policy failed to produce the intended result.

In contrast, Nixon (1980) views implementation as not necessarily a complete action to achieve the intended goal, but factors which tend either to facilitate or to hinder the process of implementation.

Mazmanian and Sabatier defined implementation as an understanding of activities that take place after a programme was formulated; events and activities taking place after the issue of public policy directives which include the behaviour of the administrative body and the web of direct and indirect political, economic, and social forces that represent the behaviour of all those involved, and ultimately the impacts of the programme (1983; p.4).

Bardach (1977) views public policy implementation as what happens after the policy had been formulated. Therefore he states that "...a policy or program-implementation process is an assembly process." Bardach views implementation as "... a process of assembling numerous and diverse program elements" which are in the hands of various parties, that are independent from each other. As a result the implementation process is associated with a process he calls "politics". This includes persuasion and bargaining between government agencies in order to activate others to contribute to the programme (Bardach, 1977: p.36). He argues that "implementation problems" are control problems, but they are specific to the assembly activities that constitute the "implementation process".

Rein and Rabinovitz (1978) defines implementation as (1) a declaration of government preferences, (2) mediated by a number of actors, (3) actors create a circular process characterised by reciprocal power relations and negotiations.

When reviewing the literature several elements were incorporated into definitions of implementation:

- (1) actions related to the carrying out, accomplishing and completing the policy,
- (2) actions taken after policy had been formulated by public or private individuals or group
- (3) actions aimed at the achievement objective,
- (4) interorganisational co-operation towards the policy,
- (5) meeting the initial conditions
- (6) environments with a number of actors
- (7) a clear objective or intention by the policy makers,
- (8) factors facilitating or hindering the process

Pressman and Wildavsky, Van Meter and Van Horn, and Mazmanian and Sabatier stress the importance of meeting pre-conditions before the implementation is to be carried out. The definitions provided by the above scholars illustrate a variety of meaning of the word 'implementation', dependent upon which perspective one is looking.

Controversies About Implementation Studies

"What an implementation study is" is the subject of disagreement by many scholars. O'Toole has pointed out his doubt that "...implementation researchers are not in agreement about what constitutes the subject of their inquiry. Some take implementation to refer to all that is part of the process between initial statement of policy and ultimate impact in the world. Others restrict implementation to the actions of those charged with handling a policy" (Otoole,1985; p.183)

Other scholars question the area or boundary of implementation studies. For example, Davies and Mason "gazing up at the bottoms" wrote about the boundary implementation studies as follows:-

"A question which is immediately raised is whether we are confusing evaluation with the study of implementation. In other words, we may be going beyond the remit of implementation studies into the realms of 'impact' studies." (1982;p.148)

Utilization-focused evaluation, the title of a book by Patton (1986), assesses on ‘how far from and in what ways the program can deviate from the ideal plan while still meeting fundamental implementation criteria’ (Patton, 1986; p.148.) Patton states that there are several ‘alternatives types’ of implementation evaluation, dealing with different kinds of implementation issues. However, first the evaluator must determine that the programme in question actually exists. Then, he or she may employ one or a combination, of the following evaluation approaches: (1) effort evaluation, (2) on-going programme monitoring, (3) process evaluation, (4) component evaluation, and (5) the treatment specification approach. Each of these approaches answers a different question and focuses on different aspects of programme implementation.

Mazmanian and Sabatier (1983) noted that :-

‘All implementation studies seek to evaluate program performance, though they can differ markedly in evaluative criteria employed. They can also be distinguished by where they focus on either policy outputs or eventual outcomes (or both)’ (Mazmanian and Sabatier, 1983; p.9-10)

O’Toole mentioned the difficulties of defining the research since implementation researchers are not in agreement ‘..about what constitutes the subject of their inquiry.’ Views differ on what implementation constituted; for some, implementation ‘...refer[s] to all that is part of the process between initial statement of policy and ultimate impact in the world’, while others ‘...restrict implementation to the actions of those charged with handling a policy,’ which excludes (1) behaviour of actors not directly designated to the policy, although they may be the necessary participants in converting policy into actions, and (2) whether the prescribed actions are likely to have the expected effects on the real world (p.183).

Van Horn (1979) emphasises the importance of distinguishing between the policy implementation and policy impacts. Van Horn explains that ‘Policy implementation encompasses actions by public and private individuals or groups that affect the achievement of objectives set forth in prior policy decisions’ (1979; p.9). This implies that policy implementation concerns with the achievement of targets. Thus, policy implementation is modest in its aspiration, whereas, policy impact

examines the policy's ultimate effect on society and its beneficiaries. He further suggests that implementation research should ask questions about what happened and why did it happen.

As highlighted above, there is divergence in terms of what constitutes implementation studies. There is some disagreement among scholars. Therefore, Lane's (1987; p.527) assertive statement concludes that "As long as the concept of implementations remains unexplicated, any theory about the condition for successful implementation will remain ambiguous." His analysis is based on the dictionary meaning that implementation has a double meaning: execution and accomplishment.

Now we have a better understanding of what implementation is and how it varies. We also perceive the relationships between the characteristics of policy design and implementation performance. Views about policy making have been changed to recognise the urgency of implementation in design of a policy. There are a range of variables available to clarify implementation and its outcomes. In spite of this progress, only a partial or middle theory of implementation has been developed (Palumbo, 1987; p.91).

TOP-DOWN AND BOTTOM-UP APPROACH

This section discusses the main features of the two approaches in implementation studies: the top-down approach and the bottom-up approach.

The Top-down Approach

Implementation studies are commonly grouped into two approaches: 'top down' and the 'bottom up'. In fact, Hasenfeld and Brock (1991) added a third group, classified as 'iterative'. The 'top down' is concerned with the way that the implementation process is structured in achieving policy objectives. The 'bottom-up' is concerned with organisations and actors who are responsible for putting policies into practice. Also, the distinction between the two depends on who did what in achieving the policy output. The weakness of the top-down approach is that it assumes only that the agencies and actors mandated in the policy are involved with implementation policy.

and also assumes the superiority of the mandated agencies. To the contrary, in reality implementation also involves other actors who are not mandated. However, the weakness of the 'bottom up' approach is that it is only concerned with those are involved with the policy. The fundamental features of a top down approach are:

- (1) Starts with policy decision by governmental officials.
- (2) Concerned with the consistency of actions and policy decisions.
- (3) Concerned with achievement of objectives as intended.
- (4) Factors affecting policy outputs
- (5) Policy reformulation over time.

Prominent studies of the variety top down are works by Van Meter and Van Horn (1975) , Van Horn (1979), Sabatier and Mazmanian (1980) and Edwards (1980). Lester et.al (1987) summarised the number of variables thought to affect implementation by these scholars (Van Meter and Van Horn, Edwards, and Mazmanian and Sabatier) and found that they ranged from four to seventeen. Lester et al, however, argued that the more important variables were not identified. They similarly questioned, the circumstances under which those variables were more important than others.

A number of criticisms were made about the top-down approach to policy implementation:

- The top-down approach neglects other actors, since it starts from the perspectives of central decision-makers. The policy decision makers are the key actors, while others are basically viewed as obstacles to policy execution. This is contrary to reality since implementation also involves the private sector, street level bureaucrats, local implementing officials and other policy subsystems.
- Top-down models are difficult to use in the situation where there is no dominant policy (statute) or agency, but rather a multitude of government directives and actors of which none is superior to the others.

- The top-down approach underestimates or ignores the strategies used by street level bureaucrats and target groups to get around central policies or to divert them for their own purposes.
- The issue of evaluation employed by the top-down approach: this uses the yardsticks of outputs as stipulated by programme objectives.

There are a whole series of arguments about the distinction between the two approaches and Sabatier (1986) has made an attempt to combine the two. Sabatier's summary of the distinction between the two approaches appears in Diagram 2.2 in this thesis.

Bottom-up Approach

The 'bottom up' approach emerged because of dissatisfaction with the weaknesses of the 'top down' approach. It employed a quite different perception of implementation. 'Bottom-up' focuses on the strategies maintained by various actors in pursuit of their objectives since local actors often deflect centrally mandated programmes for their own ends.

Barrett and Fudge (1981) argue that much of the literature takes managerial approach and views the problem of implementation in terms of co-ordination, control or obtaining compliance with policy. This approach treats implementers as agents for policy makers and tends to play down issues such as power relations, conflicting interests and value systems between individuals and agencies responsible for making policy and those responsible for taking action. Barret and Fudge introduce implementation as a 'negotiating process' and as 'action and responses' (Barrett and Fudge 1981;p.3-32).They suggest that:-

"...rather than treating implementation as the transmission of policy into a series of consequential actions, the policy-action relationship needs to be regarded as a process of interaction and negotiation, taking place over time, between those seeking to put policy into effect and those upon whom action depends." (Barrett and Fudge 1981; p.4)

Diagram 2.2: COMPARISON BETWEEN TOP-DOWN AND BOTTOM-UP APPROACH

Criteria	Top-Down (Sabatier and Mazmanian)	Bottom-up (Hjern et al)
Initial focus	(Central) Government decision, e.g. new pollution control law.	Local implementation structure (network) involved in a policy area, e.g., pollution control
Identification of major actors in the process	From top down and from government out to private sector (although importance attached to causal theory also calls for accurate understanding of target group's incentive structure)	From bottom (govt. and private) up
Evaluative criteria	Focus on extent of attainment of formal objectives (carefully analyzed). May look at other politically significant criteria and unintended consequences, but these are optional	Much less clear. Basically anything the analyst chooses which is somehow relevant to the policy issue or problem. Certainly does not require any careful analysis of official govt. decision(s)
Overall Focus	How does one steer system to achieve (top) policy-maker's intended policy results?	Strategic interaction among multiple actors in policy network.

Source: From Paul A. Sabatier, (1986), 'Top-down and Bottom-up Approaches to Implementation Research: a Critical Analysis and Suggested Synthesis.' *Journal of Public Policy*, Vol. 6, No. 1, p.33,

Implementation as a Negotiating Process

Barrett and Fudge look at implementation from the point of view of control over policy execution or the ability to obtain compliance with the policy objective as the key factor in determining implementation success and failure. It is assumed that control or compliance can be only achieved by producing the 'right' incentive or recourse to sanctions and enforcement mechanisms. Thus the limit of control or compliance depends on the amount of power (resources, legitimacy, authority) to operate sanctions and incentives possessed by one agency vis-a-vis those it is seeking to control. But, to Barret and Fudge compliance is not only a matter of control, and compliance in this sense needs to be distinguished from the issue of consensus-actors and agencies who agree to support programmes. Without total control over resources, agencies and the whole implementation 'environment', those wanting to do something may be forced to compromise their original intentions in order to get any action at all. They thus put a different perspective over implementation:-

'If implementation is defined as 'putting policy into effect', that is, action in conformance with policy, then compromise will be seen as policy failure. But if implementation is regarded as 'getting something done', then *performance* rather than conformance is the central objective, and compromise a means of achieving performance albeit at the expense of some of the original intentions. Emphasis thus shift to the *interaction* between policy-makers and implementers, with negotiation, bargaining and compromise forming central elements in a process that might be characterised as 'the art of the possible'." Barrett and Fudge 1981; p.21).

Barret and Fudge rejected the notion that implementation process starts with formulation of policy and ends with action. But,

'Rather, it is appropriate to consider implementation as a policy/action continuum in which an interactive and negotiation process is taking place over time, between those seeking to put policy into effect and those upon whom action depends.'" (Barrett and Fudge 1981; p.25)

Implementation as Action and Responses

Based on the argument that understanding the relationship between policy and action requires an action perspective which looks into the groups of actors involved, the agencies they operate within and the factors influencing their behaviour, Barrett and Fudge considered actors and agencies in combination of roles: first, making policies to be implemented by others; next, implementers of someone else's policy, and; finally, the interested party for the policy outcomes made or implemented by others. Thus, the focus of attention shifts from policy to the organisations themselves, to what is going on, who is doing it and why.

This approach stressed importance of two way policy interactions based upon negotiations and compromise. Policy implementation needs to be regarded as a process of interaction and negotiation, taking place over time, between policy makers and implementers. Finally the 'discretion' approach expresses policy implementation in a way that suits implementers rather than policy makers. As a result, the outcome of policy may be different from what was intended. This approach explains unmet policy intentions because local implementers possess certain degrees of autonomy to change policy to suit local needs. If successful policy implementation means the executing of goals exactly as intended by policy makers then there can be no discretion at the middle and lower level of organisation (Palumbo and Harder, 1981).

FACTORS AFFECTING IMPLEMENTATION

The implementation literature has highlighted numerous factors affecting policy implementation following O'Toole's (1985) study of multi-actor implementation, which was based on more than 100 studies, providing a list of a range key of variables used for analysing the inter-organisation problem. For example, Montjoy and O'Toole (1979 and 1984) and O'Toole (1983) consider policy specificity, resources, agency goals, routines, world view, structure of interdependence, technical requirements of the tasks, facilitator, perceived risk for implementers. Hambleton (1983) identifies policy messages, multiplicity of agents, multiplicity of perspectives, and multiplicity of ideologies, resources and politics of planning.

Much of the focus of policy implementation studies especially during the early days was heavily influenced by the top-down model. This was because the literatures was set in an American public policy scenario which examined how federal policies (Washington's) were implemented at the state and local level. Those programmes suffered shortfalls because of an apparent gap between the federal government's aspiration and local reality. The top down approach stressed clear objectives or goals, or the presence of legislation. This approach was concerned with giving advice to top actors about securing successful implementation.

In the USA federal policy is made through the formulation of a statute which is followed by the creation of an agency, funds and personnel. Therefore the legal imperative is considered important, because it can structure administrative behaviour and execute the implementation process through the proper design of legislation. In a democratic system such as in the USA, where legislators and chief executives are elected officials; policy should be made by legislators and to be implemented by civil servant.

Awareness of and attention to the implementation process occurred because public policy administration has moved from *classic public administration* to development of a *systems approach to political life* . In the classic public administration era, legislation was seen as non-problematic after it was formulated. Civil servants would implement it faithfully. Then policy analysts looked further beyond the policy formulation stage into subsequent outcomes of legislation or policy decisions and what extent the outcomes of decisions were consistent with original policy objectives. It was realised that implementation was not as easy a process as had been previously assumed.

Several constraints hindered and strained programme implementation, ranging from ambiguity of objectives, faulty assumptions and inadequate preconditions before policies were implemented, lengthy processes, delays, problem of interorganisational and intergovernmental relationships, insufficient funding, inadequate resources, incapability of government, inappropriate implementation design and many others.

Wolman's (1980) article entitled 'determinants of program success and failure' attempts to present a *comprehensive framework for explaining and understanding programme performance*. It presents a set of research questions to assist investigation into the determinants of programme performance and also questions and answers to be considered during policy formulation and implementation. The framework is divided into two parts: the formulating process and carrying out process. Programme success may be impeded by problems or inadequacies in one or more of the components in either the formulating stage or carrying out stage, or in both. The components of the formulating process include:

(1) **Problem conceptualisation:** stressing the importance of an adequate problem conceptualisation throughout the policy formulation and implementation process.

(2) **Theory evaluation and selection:** stresses that if the causes of problem are not adequately understood, it will difficult to device an appropriate policy. To develop an adequate theory of causation, we must have adequate data describing the problem and a theory explaining causes of the problem.

(3) **Specification of objectives:** clear and specific objective are important to permit a programme to be designed and accomplished.

(4) **Programme design:** appropriate programme design is feasible through the adequate understanding of the cause of problem.

(5) **Programme structure:** stressed the importance of administrative structure through which the programme design is to be carried out in order to accomplish objective.

The components of carrying out process include:

(1) **resource adequacy:** recognising that resources must be adequately provided.

(2) management and control structure: this is an important aspect related to capability of organisations to carry out policy as intended.

(3) bureaucratic rules and regulations: detailed rules are necessary as means of controlling and ensuring activities by members of an agency consistent with its objectives. But, the rules itself may contribute to failure.

(4) political effectiveness: stresses that the administering departments have adequate political resources to carry out the programme as intended.

(5) feedback and evaluation: inadequate feedback is a common reason for programme failure. Therefore a process of continual adjustment to the programme is necessary.

Wolman stresses on the three part policy process begin with formulation and continue to carrying out. This framework seem as the components are interrelated to one another and means that to achieve successful implementation the programme must be right from the beginning.

Clear Objectives and Pre-conditions to Implementation

Sabatier and Mazmanian outlines six pre-conditions to be met for effective policy implementation. They are:-

- a) clear policy objectives,
- b) legislation based on sound theory,
- c) well structured enabling legislation to attain what is intended and sympathetic agencies,
- d) Capable leadership in implementing agencies
- e) The programme receives active support, and
- f) The programme is stable and non-conflicting.

These conditions are not to be used to measure a programme's effectiveness , but a recipe for ensuring success of any implementation effort.

Inspired by the study by Christopher Hood of 'perfect administration', Hogwood and Gunn (1984; p.198-206) elaborated on analysis for 'perfect implementation.' They suggested a set of ten pre-conditions as necessary to achieve 'perfect implementation'. These includes:-

- Circumstances external to the implementing agency do not impose crippling constraints. These occur because some obstacles to implementation are outside the control of administrators, since they are external to the policy and implementing agency. Obstacles such as physical or political about which the administrator can do very little must be considered during the policy making stage.
- That adequate time and sufficient resources are made available to the programme.
- That the required combination of resources is actually available.
- That the policy to be implemented is based upon a valid theory of cause and effects.
- That the relationship between cause and effect is direct and that there are few, if any, intervening links.
- A single implementer which does not depend on other agencies for programme success. If other agencies are involved, they must be minimal in numbers and dependency.
- Complete understanding and accord towards objectives. The programme objectives must be clearly defined and understood by the organisation. However, it was pointed out that, most often, programmes' objectives are difficult to identify, vague, poorly communicated downward and outward from an organisation. Furthermore official objectives may not be compatible with one another and possibly proliferated with 'unofficial' goals by certain professional or other groups in the programme. Programmes' objectives are

also amended and experience changes over time. On discussing policy orientation, Ham and Hill (1991; p.12) confirmed that "...policies invariably change over time." This occurs because of incremental adjustments to earlier decisions , or major changes of direction.

- Tasks are fully specified in a correct sequence with clear responsibility identified.
- Perfect communication and co-ordination. It is necessary to have a unitary administrative system with a single line of authority. Communication also contributes to co-ordination and implementation. Contrary to this, organisations are prone to compartmentalism, professionalism and the activities of many groups with their own values, goals and interest to protect.
- That those in authority can demand and obtain perfect compliance: the ability to command perfect obedience and no resistance at any point in the administrative system. Those in authority must also be able to secure total and immediate compliance from others whose consent and co-operation are required for success of the programme.

These preconditions are an ideal situation where it is difficult to attain. However, it provides a framework for understanding why policies are not achieved.

Mazmanian and Sabatier (1983) analysed implementation by focusing on the outcome of policy. These authors consider policy objectives of prime importance any policy implementation. A policy will undergo three stages; formulation, implementation and reformulation. The formulation process is just the beginning, clarifying on whom the policy is targetted. They view this as the role of legislators. Van Horn argues that policy formulation requires adequate theory about how the world outside works. Similarly Pressman and Wildavsky agreed that the creation of a statute is analogous to adopting theory of how things work. In their words "*...Policies imply theories.*" In examining implementation process Mazmanian and Sabatier urge programmes' objectives should be verified for the following factors:-

1. How *consistent* is the original objective with the policy outcomes or the outcomes of the implementing process?
2. What *modifications* were made to the original objective and directives?
3. What *factors affect modifications*? Why and what is the *impact of modifications* on goal attainment?

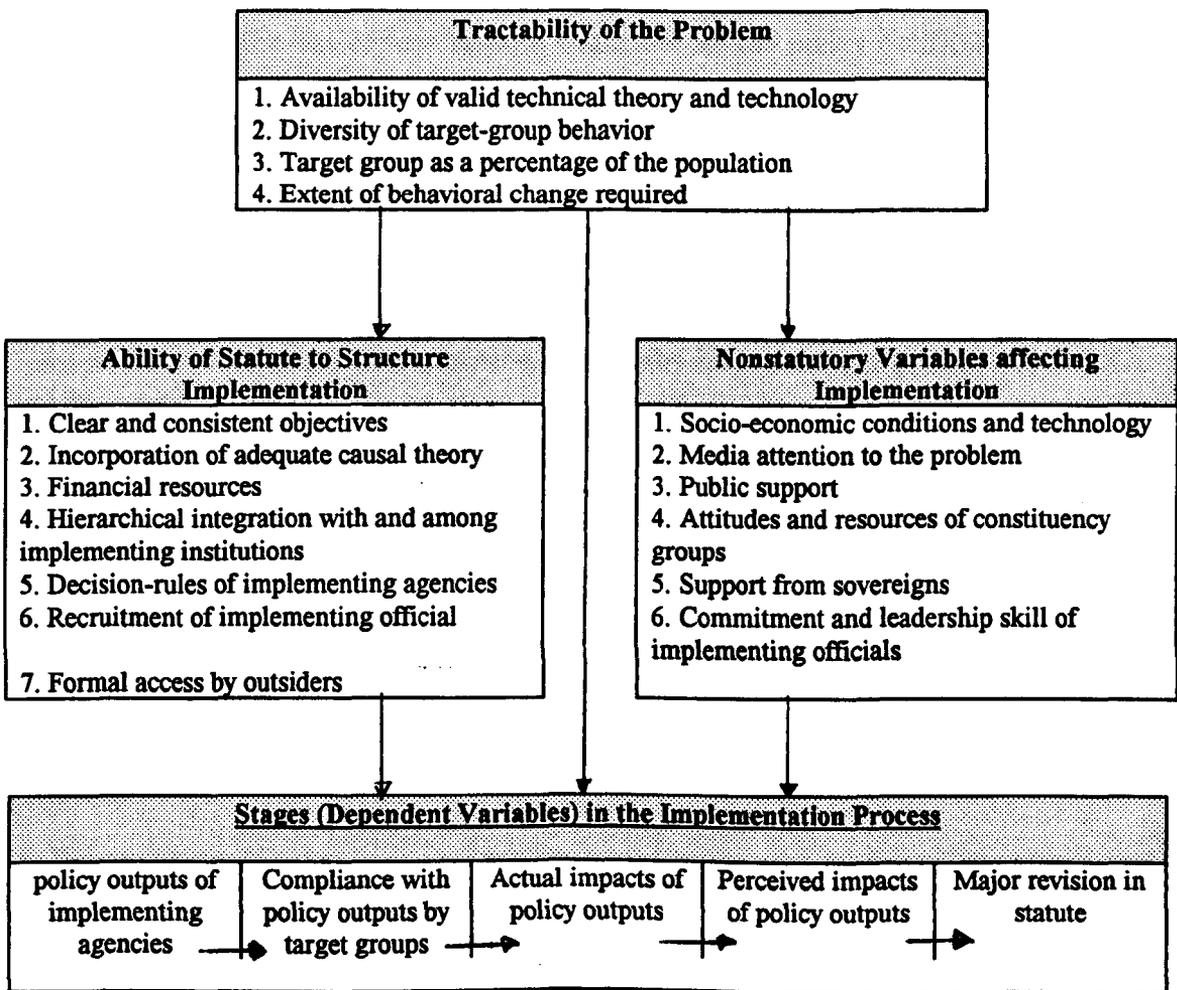
To Sabatier and Mazmanian (1983), three sets of variables are involved in the implementation process. First, the tractability of the problem which concern with technical difficulties, diversity of target group behaviour, target groups as percentage of the population and the amount of behavioural changes intended. Second, the ability of statute to structure implementation. This is related to the question of how to formulate statute so that it is capable of structuring implementation to achieve goals, gain participation and receive support. Therefore, the statute must contain elements of: clear and consistent objectives, adequate causal theory and financial resources, capable institution and formal access by outsiders. Finally, non-statutory variables. Factors and groups influencing implementation include: socio-economic conditions and technology, public and constituency support, and the capability of implementing officials. This framework has been applied over twenty times by Sabatier and Mazmanian themselves and others in variety of policy areas and political system (p.83).

These independent variables will result in five stages of development in the implementation process. The five stages are: policy output, compliance with policy, actual and perceived policy impacts and finally revision of statute. Nixon (1980) simplified the implementation process into two stages: the interpretation of the policy stage and the response stage. The model of policy implementation process proposed by Sabatier and Mazmanian is shown in Diagram 2.3 of this thesis.

McFarlane (1989) tested the statutory coherence hypothesis which states that effective implementation is a function of the extent to which a statute coherently structures the implementation process. This hypothesis is derived from the Sabatier and Mazmanian's framework for the policy implementation. She used the Federal Family Planning Programme (USA). The research confirmed that statutory coherence was a powerful predictor of subsequent implementation. The study also confirmed that two variables, clear objectives and hierarchical integration, are specially important for effective implementation. Implementation also deals with the enforcement of law.

Sometimes it seems that certain legislation is being enforced slowly. This is because, when the law is created, there is no clear indication of who is responsible for enforcing it. To ensure programme success, it must be based on strong staffing, assertive leadership, and stringently enforced rules. Inadequate enforcement or lax individuals are the only reasons for unsuccessful implementation.

Diagram 2.3: FLOW DIAGRAM OF THE VARIABLES INVOLVED IN THE IMPLEMENTATION PROCESS



Source: Sabatier and Mazmanian (1980, p.542)

Policy implementation is said to comprise measures by public and private individuals or groups that affect the achievement of objectives set forth in prior policy decision. It is a study of the processes of putting policy statements into public services through federal, state, and local administrative agencies. Policy implementation determines whether those public services were delivered as they were intended, and whether changes in programme structure and operation mandated by statute occur. It focuses on question of 'what happen?' and 'why did it happen that way?'

Policy implementation studies are concerned with output and less concerned with outcome. It is an attempt to identify the condition under which an intended output may be achieved. Implementation studies attempt to evaluate agencies capacities to deliver output. It is less concerned with evaluation of the policy itself (Dunsire, 1978: p.18).

Lengthy Process, Delays and Inter-Organisational Relationships

Pressman & Wildavsky's case study of EDA in Oakland pointed out that the project faced implementation problems due to the huge numbers of road-blocks. The finding of the study showed that implementation had problems because of the innumerable steps involved, wrong theoretical assumptions, multiple agencies rivalries and involvement. Innumerable steps suggested that simplicity was much to be desired. The fewer the steps, the fewer the chances for disaster.

Pressman & Wildavsky described the problems of interagencies' relationship, such as: sometimes participants may agree on the substantive ends of a proposal but still oppose the means for effectuating it. Several reasons explain why this occurred such as:

1. Direct incompatibility with other commitments. (various departments competing for scarce resources)
2. No direct incompatibility, but preference for other programme (the feeling is that such programme were not the responsibility of the organisation but should be carried by others)

3. Simultaneous obligation to other projects agree with the project but have projects of their own which should be given priority.
4. Dependence on others who lack a sense of urgency in the project.
5. Difference of opinion on leadership and proper organisation.
6. Legal and procedural differences.
7. Agreement coupled with lack of power. Lack of resources to carry out such programme.

Pressman and Wildavsky highlighted the sequence of steps that have to be taken in order to produce specific outcomes and implied that there should be better and shorter way to achieve the same end. But, must be the policy always go wrong because of many steps?

Bardach (1977) studies the complexity of relationship amongst government departments and agencies. His study is concerned about programme implementation and examines administrative and political obstacles to the achievement of programmes' specific goals. This looks into questions concerning public management with a sensitivity to organisational and political realities.

Bardach argues that government institutions do not act in isolation from each other, and their behaviour is not independence from the substance of policy they deal with. The process of policy making involves a complicated interaction between government institutions, actors, and the particular characteristics of substantive policy areas (Bardach, 1977; Foreword)

According to Bardach, the heart of the implementation problem is the complexity of intra-departmental relationships, inter-departmental relationships and inter-governmental relationships. A single governmental strategy may involve the complex and interrelated activities of several levels of governmental bureau and agencies, private organisations, professional associations, interest groups and clientele population. Intra-departmental relationships involving control and implementation issues, are shown by Dunsire's studies to involve "...a strong ethos obligating others to consult the proper quarters and to listen to the office holders advises on matters within his jurisdiction." (Dunsire, 1978; p.223).

In highlighting several public policies and programmes implemented in the USA, Bardach concluded there were three major hazards to subsequent events after the formulation of public policy. First; after the policy mandate is agreed to, authorised and adopted, there is under achievement of stated objectives (creating jobs for hard-core unemployed, building new towns, getting teachers to act in different mode.) Second, delays in programme implementation and third excessive financial cost (Bardach, 1977:p.3). Bardach realised that it was hard to design good policy, harder still to formulate them into words and slogans that are pleasing politicians and their constituencies, and furthermore unendurably difficult to implement them in a way that pleases everyone including the programme's beneficiary or target group (Bardach, 1977; p.3). He at first believed that implementation problems were serious. Surprisingly, Bardach's conclusion was that the most important problems affecting public policy are not those of implementation, but the basic political, economic, and social theory. Therefore, in the short run, it is essential to invest a great deal of energy in designing implementable policies and programmes. Finally, in the long run, it is essential to be modest in demands and expectations of government institutions. (Bardach, 1977: p.283). Similarly Pressman and Wildavsky (1973, p.xvi) agreed that faulty implementation arose because aspirations were set too high and asked for too much.

To ensure implementation success, it is appropriate to design policies and programmes that withstand social and political pressure during implementation phase. Several stresses and strains must be taken into account in designing an implementable policy. These are elements that bring adverse affects on the programme-assembly process: (1) diversion of resources, (2) deflection of policy goals from the original policy mandate, (3) the dilemmas of administration: resistance to explicit, and usually institutionalised, efforts to control behaviour administratively, and (4) dissipation of personal and political energies in game playing that might otherwise be channelled into constructive programmatic action e.g. wastage for too busy defending themselves against the manoeuvres by other game players. This results in underperformance and delay. (5) Programme assembly process: delay in assembling programme elements and delay in reaching collective decisions. (6) Negotiation; by communicating about intention and reciprocal expectations.

He concludes that the character and degree of many implementation problems are inherently unpredictable. The classical symptoms of under performance, delay and escalating cost are bound to appear. Some one must be willing and able to set the policy back on course.

Expedited implementation as reported in the strategic petroleum reserve programme, can lead to programme failure (Weimer, 1983). The theme of this case is that problems can arise if attempts are made to expedite implementation without adequate attention to the development of necessary expertise in the face of bureaucratic constraints. The analysis of this case employed the evolutionary process where four stages have been identified:-

(a.) strategic planning stage: where a general goal is translated into a specific plan of execution.

(b) system design stage: where a detailed planning of programme must be completed.

(c) management control stage: where procedures are developed to ensure the system design is carried out in an efficient manner.

(d) project execution stage: where the plan is actually carried out.

This is an analysis of the Strategic Petroleum Reserve (SPR) in USA aimed to stockpile petroleum of between 150 million to one billion barrels. This target appeared to vary from time to time. During Ford administration a goal of 150 million barrels by the end of 1978 and 500 million barrels by 1982 was set. Carter re-established a higher target of 250 million barrels by end of 1978, 500 million barrels by the end of 1980, and one billion barrels by of 1985. By the end of 1980 only about 100 million barrels of oil were actually stored in the storage capacity of 250 million barrels. Neither Ford nor Carter administration goals were met. Why was the target not met? Weimer identified seven sources of implementation failures of each is related to some degree to scarcity of resources and inflexibility of expertise.

Based upon US defence strategy, the SPR office received a directive to accelerate the schedule two years. This acceleration decision was unrealistic in view of the weak capability of SPR organisations of personnel and funding. Weimer showed that:-

“The acceleration decision is an example of common problem faced by program administrators: lack of attention by political decision-makers to limitations in managerial resources. Political decision-makers must deal with numerous issues and rarely have the time, inclination, or expertise to give serious attention to questions of organizational feasibility. The desire for faster results or the political necessity of widespread geographic distribution can lead to unrealistic program goals, especially for new programs without cost or schedule experience.” (Weimer, 1983; p.177)

This programme also suffered planning inadequacies and technical problems, such as feasibility studies being completed by inexperienced personnel in the mining and petroleum field. Therefore, the feasibility studies had serious deficiencies. Weimer suggests lesson to be learnt from an attempt to expedite programme implementation:-

- **First, the risks involved in not following the natural progression of the four implementation stages; from strategic planning to finally project execution.**
- **Second, the importance of giving careful attention to the organisational environment of new programmes.**
- **Third, external oversight is unlikely to play a constructive role during the early stages of implementation when the programme character is largely determined.**
- **Finally, the choice of implementing agency. Why were bureaucratic politics allowed to become such an important factor in the implementation of the SPR? Why not, the White House intervene with the programme?**

Capability of Government

Public agencies are often viewed as rule-bound and inflexible bureaucratic machines which grind forward regardless of changing problems and circumstances, concerned more with their own procedures than with the public they are intended to serve (Barret and Fudge, 1981; p.3). Government, whether national, regional or local appears to be adept at making statements of intention, but what happens on the ground often falls a long way short of the original aspirations. Government either seems unable to put its policies into effect as intended, or finds that its interventions and actions have unexpected counter-productive outcomes which create new problems. Blame for ineffectiveness of government intervention tends to be directed either at those responsible for policy-making, for constantly producing the 'wrong policy', or at the implementing agencies for being, apparently, unwilling to act (Barret and Fudge, 1981; p.3).

The growing studies in implementation which have chronicled a series of mishaps and failures have involved many different implementation efforts. In effect this raised the question of whether the government is capable of implementing any policy at all (Nakamura and Smallwood, 1980; p.179).

A diminishing of faith toward efficacy of public policy and government in general has led to a number of slogans such as 'failure of the state', 'governmental overload' and 'ungovernability thesis'. The scope of government has increased so rapidly that it has produced marginal returns and policy failures. The materials and political resources available are insufficient for the tasks assumed within a competitive electoral situation. This situation has worsened due to increasing social and economic complexity and the increasing interdependence of activities which have resulted in policy uncertainties. The state has expanded its policy into areas where its effectiveness is low and dependent upon external interest groups.

Sabatier and Mazmanian (1983) are pessimistic about the power of government to deliver intended programmes' objective. They referred to this phenomenon as a 'crisis of implementation', because of an inability to translate stated goals into reality.

Therefore they emphasise "...the ability of government to deliver -to implement -the specific objectives that are set forth in constitutionally adopted public policies." (Mazmanian & Sabatier, 1983; Preface).

As has been mentioned elsewhere, design is playing a crucial role in effective implementation. It is emphasised that the capability to execute implementation as intended is related to the choice of implementation design. The government have alternatives to the choice of implementers or tools to carry out the policy. The literature points out the familiar American model of federal policies implemented by state or local authorities. The choice of who implements the policy effects the intended outcome.

Rondinelli et al (1989) have observed contingency planning for innovative projects in designing education reforms in developing countries. They elucidate that attention should be paid to assessing the capability of public and private organisations to implement projects. They use the "contingency" approach which analyses the management requirement for project and management capability in order to reduce the implementation gap.

Funding and Resources

The importance of resources in implementation is obvious as confirmed by Van Horn (1979) where it is used as one of the criteria in the framework for the model of intergovernmental policy implementation. He states,

"The importance of resources to any program does not require much elaboration: inadequate funds are almost always cited as a reason for the failure of implementation efforts. But there are two other aspects of programme resources that will also be considered in the analysis, namely, the timing of the funds and the size of those funds in relation to the overall budget of the community." (Van Horn, 1979; p. 14)

Yet, another view asserts that ‘it appears that the surest way to avoid inter-organizational implementation problems is to establish a specific mandate and provide sufficient resources...’ (Montjoy and O’Toole, 1979; p.473) In proposing ‘towards a theory of policy implementation’ they analyse four propositions based on different combinations of the variables (a) specificity or vagueness of mandate, and (b) the amount of resources provided. They find that effective implementation can be achieved if an organisation is provided with a specific mandate and available resources. To the contrary, the implementation of policy will be impaired if only a vague mandate is issued and any resources are not provided.

Inadequate resources and funding are highlighted as a hindrance to implementation. Hogwood and Gunn (1984) stress the importance of resources and funding as one of the preconditions for implementation success. Sufficient resources and their availability at every stage of implementation are necessary for a successful outcome. Thus, insecurity of resources is hazardous to implementation (Mountjoy and O’Toole, 1979). Mazmanian and Sabatier (1983; p.23) also realise the significance of resources and access to expertise. They explain that money is obviously important for any programme. Moreover, they argue that an adequate level of funding helps to effect policy implementation, but it does not guarantee a decent start. However, Bardach (1977) reiterates that one of major hazards to public policy implementation is an excessive financial cost.

Wolman (1981) perceives two important aspects relating to resources: the programme funding and staffing. Inadequate programme funding could lead to programme failure in three different situations. Firstly, adequate funding is not available to meet all objectives but it is sufficient and makes an obvious contribution to part of the objectives. Secondly, the funding result has no perceptible impact. In order to achieve the objective, a huge amount of funding is required. Finally, with inadequate funding objectives can still be achieved, but for a lesser number of recipients than intended.

Thain (1987) stresses that policy implementation requires participation, co-operation and an inter-organisational relationship because each organisation is holding a resource. However no one organisation holds a complete resource; each has to

exchange its resources and this leads to power dependence and interdependence among actors.

Several others have studied resources as one of the variables in relation to policy implementation. For example, Chase (1979) identifies the availability of resources required as one of the basic obstacles to the implementation of the human services programme. He further divides resources into four sub-categories: (a) money, (b) personnel, (c) space, and (d) supplies of technical equipments. Although a programme has been appropriated for funding, a programme manager should also consider :-

- (1) The limitation on the funds, and
- (2) The availability of additional funds when needed

Financial legislation and bureaucratic procedures always impose a limitation on the way in which funds are appropriated and utilised; for example legislation and procedures may limit the utilization of funds in certain geographic areas, within a particular financial year, or only for specific purposes after complying with certain requirements. This limitation can impair effective implementation. Availability of additional funds when required is also an issue that needs considering by the programme manager. Chase suggests:

‘Even assuming that the program manager can prove he needs additional funding and will spend it competently, whether or not he gets it will normally depend on a number of factors, including: how much money he will need; the general availability of funds; the seriousness of the problem to be addressed; the view of the problem by politicians, press, and public over time; and the operating agency’s capability with the funding resources.’ (Chase, 1979; p.401)

Hambleton highlights ‘resources’ amongst other variables in analysing the growth of a policy planning system. He emphasises that “*Resources*, and particularly financial resources, are central to the policy implementation process.” (1983; p.411) Hambleton proposes three hypotheses related to these:

- (a) Resources might be expected to promote implementation activities that fits the central aims.

- (b) Availability of resources might be expected to distort implementation activity away from the achievement of central aims, and
- (c) The focus of implementation work become the management of incremental growth.

In relation to the first hypothesis, the underlying argument is that implementers at the state level conform to federal objectives because they receive a share of resources from the central agency. The second hypothesis is taking the bottom-up approach. It argues that resources can be utilised by implementers at the local level to further their own ends. The underlying assumption to the third hypothesis is that, implementers are busy with making urgent decisions and programming the allocation provided. Therefore, wider policy considerations are neglected.

In relation to the resources provided by the central agencies, Hambleton stresses that:

“...we need to guard against putting too much emphasis on the widely held ‘top down’ view that the injection of additional resources will, in itself, speed forward the implementation of policy.” (Hambleton, 1983; p.412)

Ingram (1977) questions the basic assumption underlying the use of federal grants-in-aid as a tool for implementing federal policies. She argues that the federal agency has money, expertise and resources to offer, whilst, the state government possesses information and access to Congress. This, cause the undercutting to the initial bargaining of the federal agency in the process of bargaining. As a consequence the federal’s policy objectives are difficult to realised, unless the objectives are shared between the two government.

Despite the importance of resources, implementation can still be carried out with determination, investment of time and support by management and councillors. This has been shown in a study of budget reform in a rural county’s government in South Carolina. This county has succeeded in overcoming constraints of inadequate staff and financial resources (Massey, 1993).

LINKING THE LITERATURE AND THE PROBLEM IN QUESTION

Based on the review of literature above, a number of observations are presented. Firstly, implementation studies have attracted major concern in the public policy analysis because they are a part of the whole policy process that translates policies into actions, outcomes and results, whether as originally intended or otherwise. The literature shows that a number of problems are faced during policy implementation stage due to unsound theoretical assumption made during the policy formulation stage. Furthermore, this problem exists at the end of the policy process as reflected in 'unmet goals.' Secondly, to ensure success of policy implementation, several pre-conditions must be fulfilled ranging from a clear and structured legislation to consistent resources and political support. Thirdly, policy becomes strained and stretched during the implementation process due to the complexity of government organisational structures, the number of complicated procedures and obstacles. It does not take dramatic actions or big events to create an implementation problem. It is just an everyday practice of bureaucracy. Fourthly, inter-agency and inter-governmental relationships are areas that require special considerations for policy implementation. Finally, policy implementation reflects the capability of government to bring about outcomes of public policy. Although it is difficult to formulate a good policy, it is more difficult to implement it and ever harder still to satisfy everybody. Therefore a reasonable expectation and achievable performance must be set during policy formulation (Bardach, 1977). Government should make their intentions moderate, recognising that their policies are limited and constrained by resources, structure and any unforeseen circumstances.

The studies of implementation are evidenced in a broader area such as studies on air pollution, education, community development, economic development, employment and training, housing, welfare and a host of other fields of studies which can be found in the implementation literature. A large majority of these studies utilised the case studies approach. Although a deep and detailed account of processes are provided, still there is a lack of generalisation. Realising this weakness, some scholars (e.g. Van Horn and Van Meter, Sabatier and Mazmanian) offer a framework for analysis. However, the frameworks are still broad and consist of many variables. Chase

(1979) for example, proposes three sets of variables and identifies 15 areas that deserve attention and which include 44 more factors for consideration. Why should not the study be narrowed down by utilising limited variables but with larger samples? Implementation studies may be too complicated for a generalisation, that is why a complete and elegant theory of implementation is still not available.

The studies are also dominated by the American and European policy scenario. A broader outlook of policy implementation should be opened up to developing and third world countries. This could probably bring some more insights to explain more clearly public policy implementation. For example Mahmud (1992) mentions that the Malaysian government's is concerned with outputs and the impact of public programmes on national growth as well as poverty eradication. The government is taking steps to upgrade the planning and implementation capabilities to ensure that plans are executed without serious shortfalls. Moreover, Mahmud suggests that in order to overcome policy shortfalls governmental processes should be simplified and over-centralisation should be reduced.

In the case of PLCHP, although several treatments were introduced such as the formulation of revolving funds and an increased in allocations, still the bureaucratic routine caused delays, lengthy processes and difficulties in accessing the funds. This is because the programme is operating with the complexities of government organisation. In which agencies compete within the government organisational system in order to maintain their effectiveness, to justify their existence and to protect their domain. Government organisation becomes more complex because it is further divided into several levels of government. These agencies hold specific resources and power. They also represent different interests whether reflecting their own specialist functions, departmental interests or the nature of their locations (whether federal, state, regional or local). Thus, important public policy like "housing for the people" could be the victim of this "game" of organisational complexity. There must be ways in which the policy can be attained effectively through a proper implementation mechanism, process of negotiation and coercion. Or there must be an approach to put back the policy on the proper track if it is considered failed, an under-performed or been "derailed"? Therefore the more complex the government structure and the more numerous the

duplicating agencies, the higher the degree of co-operation and co-ordination among them is required.

Where do this study stands?

Programme implementation is one of the problem areas in the overall public policy process on housing in Malaysia. Policy performance, as expressed by the intention of providing all Malaysians access to housing, falls short of its promise. Taking the 'proximate effects'⁽⁷⁾ of the difference between the intended target and actual number of houses completed indicate this programme is facing an 'implementation gap'. This is also proven by the problems of under utilization of allocation and general under-performance. The implementation of this policy through intergovernmental and interagency relationships is difficult and demands a high degree of co-operation. Since implementation studies are concerned with the achievement of intended objectives, they could offer an answer to the phenomenon of the unmet target of PLCHP in Malaysia which is under study.

SUMMARY AND CONCLUSION

In this chapter we have tried to understand the topic of public policy implementation - the process of putting policy intention into action - the constraints and the problems. There are several approaches adopted in examining the topic of implementation such as case studies, evaluation, synthesis, framework of analysis, etc. Thus, a range of factors has been offered explaining these problems such as: deficiency in concept and complexity of joint action (Pressman and Wildavsky, 1973); implementation games between agencies (Bardach, 1977); inter-governmental complexity (Larson, 1980); various actors and arenas (Nakamura and Smallwood, 1980); counterintuitive implementation design (Meyers, 1981; p.37-40) multi-actors inter-organisational relationships (O'Toole, 1986), and many others. This range of factor confirms that implementation problems of public policies which arise because of their execution are dependent on a variety of actors and agencies at various levels of government. How the interaction and relationships between these actors and amongst

agencies are viewed depends upon the approach one is taking, whether the 'top-down' or the 'bottom-up'. Although differences exist between the two, both approaches are concerned with interactive amongst actors and between agencies. The 'top-down' approach starts from a policy decision (e.g. statute) of the government, emphasising policy objectives and assessing the relationships between policy makers and implementers. In contrast, 'bottom-uppers' start from interaction amongst the multitude of actors at the bottom or operational level, putting less emphasis on policy objectives but a wider perspective on the consequences of the policy. 'Top-down' emphasises on mandate and hierarchy in contrast to 'bottom-uppers' views that interaction not only covers mandated agencies and actors, it also operates in circumstances without dominant statute and there is no pre-eminent hierarchy amongst actors within the policy and outside the policy. The drawback of these two approaches is over-emphasising either 'central' or 'local'.

In this chapter we have also highlighted various definitions of *'implementation'*, despite their differences many authors stress that implementation encompasses actions or steps in relation to achievement of policy objectives. These definitions also emphasise 'initial conditions' and the process required to achieve objectives. Therefore putting policy into effect requires co-ordination and management of various elements to achieve the desired goal. These definitions highlight the 'top-down approach' where public policies are made at the top and transmitted downward. On the contrary the 'bottom-uppers' argue that policy may start from the responses at the bottom and be transmitted upwards. As a result, policies are made at various level of governments and can include 'political intention...formal decision...government circulars, managerial statements, or detailed administrative procedures providing 'rules' for the carrying out specific task[s]?' (Barret and Fudge, 1981; p. 11). However, it can be argued that policy and its objectives may involve two way communication between the top-down and bottom-up process.

A range of factors affecting policy implementation has also been highlighted. These include initial conditions to the implementation process, lengthy processes and delays, problems of inter-organisational relationships, the capability of the government to carry out the policy, the availability of resources and funding and many others. The understanding of policy implementation studies will bridge the gap between these and

the research topic of the implementation of the Public Low-cost Housing Programme (PLCHP) in Malaysia.

Having considered the implementation of policy studies in this chapter, what lessons can we learn from this? What is the author's opinion of implementation from the literature reviewed? In this concluding section, this author presents his alternative perspective and suggests how policy implementation should be interpreted to further enhance the policy-action relationship.

Implementation as Interaction of Agencies and Actors

The key point in implementation is the process of putting policy into action, starting from the process of translating policy decisions into action. This process inevitably requires a certain degree of planning, managing and co-ordinating of resources, involving agencies and actors in carrying out those actions and going through several levels of government. Implementation problems therefore are associated with problems caused by 'multiplicity of agency' or 'interagency relationship' or interaction amongst actors. Therefore, this study views implementation as including two dominant points: (a) actions to achieve policy objectives, and: (b) interaction between actors and amongst agencies that affect the achievement of policy objective. Concerned with the limitations of taking only one approach of either 'top-down' or 'bottom up', this study adopted a combination of the two approaches. This combination approach is not to impose an entirely new perspective on implementation, rather to help to widen the exploration of the understanding of how the process putting policy into action can be carried out. The study of the PLCHP is characterised by the goal directed top-down's criteria as a measure of programme performance and at the same time emphasis is put upon interaction between agencies and actors at various levels of government and through out the implementation process, especially the actors and agencies at the bottom that affect the programme performance.

Goal directed programme implementation

Some situations in implementation studies are explicitly goal-directed and aims at achieving a specific target. In these situations, under-achievement is considered as 'implementation deficit'. For example, in the construction of public low-cost housing in Malaysia the programme's clear goal is constructing a pre-determined number of houses, within certain time frame and cost limitation and it is aimed at supplying houses for lower income groups. The process of decision making to achieve these targets involved two-way consultation of 'bottom-up' and 'top down'. Elmore stated that this goal-directed policy consists of "...defining a detailed set of objectives that accurately reflect the intent of given policy"(1978; p.191). The success or failure of the organisation is judged by observing the discrepancy between the policy declaration and subordinate behaviour. However, Elmore further stated that "Regardless of how well organized an agency might be, its ability to implement program successfully depends, to some degree, on its ability to influence agencies at other levels of government." (Elmore, 1978; p.197). Therefore, the goal directed as one of the 'top-down' criteria is utilised in the study of PLCHP, where the programme's output is measured in quantity, time and cost.

Interaction of actors and agencies

Both approaches, the 'top-down' and 'bottom-up' over-emphasise the policy implementation whether from the 'centre' or from the 'local' approach. The bottom-up approach for example, adopted the view that programme success was the result of the skills of local implementation structure in carrying out action, rather than the effect of central government officials. This argument is strengthened by the ability of 'local actors' to frustrate the 'centre' by deflecting the mandate, using their own discretion, leading to the results of policies not being as intended. This is because actors at the bottom subscribe to different perspectives about the goal-directed policy objective. Policy is not regarded as fixed but more a series of intentions around which bargaining takes place and which can be modified as each set of actors attempts to negotiate and maximise their own interests and priorities.

It is also important to recognise that action is the product of negotiation and compromise as posited by Barret and Hill [(1981) from Ham and Hill, 1993; p.105]. They argued that many policies: (a) represent compromises between conflicting values; (b) involve compromises with key interests within the implementation structure; (c) compromise with whom implementation will have impact, and; (d) are framed without attention given to underlying forces which will undermine them (e.g. economic forces).

Barret and Fudge (1981) proposed the rational model of the policy action relationship - the step involved in putting policy into effect. They used this analysis as a basis for understanding the implementation process by (a) multiplicity and complexity of linkages; (b) questions of control and co-ordination; and (c) issues of conflict and consensus. From this analysis they suggested policy action needs to be considered in a political context and as an interactive and negotiative process taking place over time between those seeking to put policy into effect and those upon whom it depends (1981; p.29). However, it is not clear how negotiation and bargaining will take place when the intention is not to amend the content of a policy, only the manner how of carrying out the detailed operation. In this situation, implementers need to comply with the objective as well as conforming to the rules, to consider the requirements or pressure imposed by actors or agencies.

Barret and Fudge (1981) proposed the implementation process for negotiation and bargaining where changes of intention occurred over time. They posited implementation as an interactive process whereby the response may in itself influence and change policy during the course of implementation. This shift of intention is necessary when co-operation or compliance can only be achieved by negotiation and bargaining. They proposed to look at the groups of actors involved, the agencies within which they operate and other factors. They suggested also looking at the combination of roles; not merely the policy makers' and implementers' relationships, but also their roles as interested parties affected by the outcome of the policy made and implemented by themselves or others.

What is bargaining power? It includes factors such as: the functions, responsibilities and statutory power conferred upon agencies from 'above'; political structure and accountability; environmental pressure and constraints - social,

economic, physical and political; access to resources-constitutional, legal, hierarchical, financial, technological and information (Barret and Fudge, 1981; p.27).

Therefore this study takes some features from both the top-down and bottom-up approaches because the study of implementation is concerned with the explanation of the result or outcome of the programme. The study seeks explanation for the programme's "under-achievement" which it predicts is associated with some elements of pre-condition, process and environment of the policy which was implemented. It also looks at the effect of the interaction between agencies and actors across the levels of government and at the actors at the bottom. It needs also to re-emphasise that the framework must look as well at actors outside the policy arena, whether a hierarchy exists or not, as they to a certain extent, may affect the achievement of the policy objective. This also suggests a broader perspective looking into different periods of implementation and external forces such as inflation, and whether these may have significant effect on the programme implementation

This study examines the programme or detailed actions, assesses it through the implementation of projects, rather than assessing the policy. It considers to the realisation of programme including the implementation process, a range of agencies and various levels of government. The federal government monitors and provides funds and other technical assistance (if requested by state). States government in turn, provide other resources e.g. land, management and to meet additional funds if these are not adequate. They also monitor projects state-wide, implementing agencies, the land and district office and contractors who realise the projects and other departments where their service and sanction are required. The question is how do these actors and agencies react and view the programme? They are more interested to impose their own perspective on the programme.

The government has indicated that in its view the administrative problems associated with project implementation stem from the proliferation of government organisations which, together with the administrative culture or style of Malaysian officials, results in administrative inefficiencies which cause delays in the projects (Davies, 1981; p.28).

Thus, there is a need for more attention to be paid to the interaction between the subject matter of policy (and thus specific groups and interests likely to be involved in or affected by it) and organisational contexts in shaping the scope and limits for action. However, since the process can move from various levels of government, therefore it involves interdependence between the actors at the centre as well as actors at the bottom.

Endnotes

¹ See discussion on the changing perceptions of policy implementation from the “classical” model of administration to the recent studies of implementation in R.T.Nakamura and F.Smallwood,(1980) *The Politics of Policy Implementation*, St.Martin Press, N.York. Chapter 1 provides an explanation about assumptions of the classical model of public administration to the problem of implementation.

².Some authors call Pressman and Wildavsky study on implementation as “seminal work” (e.g. Mazmian and Sabatier, 1983; Alexander, 1989,p.451; Ham and Hill,1993; p.5:), while others call “landmark work” (Alterman, 1983; p.64),”attention getting, suggestive study” (O’Toole,1985; p.181), “ occupies center stage” (Bowen, 1982)

³ On the contrary, although agreed with the rarity of literature on implementation subject as central theme with analytical treatment, Dunshire (1978) disputed that this subject was not focused before just because it did not have direct title of 'implementation problem'. Dunshire pointed out, although rare, there existed literatures related to implementation such as implementation of particular law, judgements and decisions, manual on administration which contained treatment of implementation process.

⁴.Bowen joins Pressman and Wildavsky’s argument about multi-actor implementation. Pressman and Wildavsky use multiplicative model from probability theory to support their point that the ‘complexity joint action’ leads to the probability of implementation failures. However, Bowens engages the probability theory to explain and predict implementation success. She proposes four addenda to predict implementation success: persistence, packaging of clearances, bandwagons, and policy reduction. The advice to hopeful implementers is to be persistent, use multiple implementation scenario, reduction of programmes into components, calculable clearance points, aim at additive probability and obtain information about clearance times and bandwagon effect.

⁵ In his book ‘The Evaluation Enterprise’, Meyers stressed on the understanding of societal factors in programme evaluation. Thus, a good programme evaluation is ‘informed by substantive social theory.’

⁶ In the language of Nakamura and Smallwood’s (1980; p.24)

⁷ In Van Horn’s terminology of the different between the intended output and actual output.

Chapter Three:

POPULATION GROWTH, HOUSING CONSTRUCTION AND HOUSING REQUIREMENTS

Introduction

This chapter reviews population growth, housing requirements and housing construction in Malaysia. This basic information is necessary to understand some of the key issues in housing development in Malaysia. The main focus covers population growth and housing development between 1970 and 1991.

POPULATION GROWTH

In comparison with most Asian countries, Malaysia is a small state with a population of less than 18 million in 1991. About 80% lives in Peninsular Malaysia, while the remainder lives in East Malaysia. Originally known as Malaya, this country gained independence from the British in 1957, where a federation of eleven states formed as the Federation of Malaya. Then in 1963, two more states, Sabah and Sarawak in North Borneo, joined in the Federation of Malaya to form Malaysia¹. The census covering the whole of Malaysia began only with the 1921 census. It reported that the population of Peninsular Malaysia was 2.9 millions and in Sabah and Sarawak 240,000. In 1931, the population of Peninsular Malaysia had increased to 3.79 million and by 1947 to 4.9 million people. In 1957, the population of Peninsular Malaysia was 6,279,000. Table 3.1 below provides information on population growth rates between 1901 and 1991. Over the period of 90 years between 1901 to 1991, Malaysia gained a net population increase of 16.31 million, from 1.26 million in 1901 to 17.57 million in 1991. Population grew at an average rate of 3.0 per cent per annum over the period. This growth is rated as “explosive” growth (Bogue, 1969; p.36): the population doubles every 23 years at this

¹. Besides Sabah and Sarawak, Singapore also on 9.7.63 joined Malaysia, then on 9.8.65 it separated from Malaysia.

rate. Population increase had been due to high natural increase, immigration, especially before 1950, and also as the result of inclusion of Sabah and Sarawak into Malaysia in 1963.

Table 3.1:
POPULATION SIZE AND GROWTH RATE IN MALAYSIA 1901-1991

Year	Peninsular Malaysia	Sabah and Sarawak	Total	Annual Growth Rate
1901	1,020,000	240,000	1,260,000	
1911	2,339,000	450,000	2,789,000	8.1%
1921	2,907,000	550,000	3,457,000	2.2%
1931	3,788,000	650,000	4,438,000	2.5%
1947	4,908,000	870,000	5,778,000	1.6%
1957	6,279,000	1,100,000	7,379,000	2.5%
1970	8,809,557	1,629,873	10,439,430	2.7%
1980	10,944,844	2,191,265	13,136,109	2.3%
1991	14,127,556	3,439,426	17,566,982	2.6%

Sources

1. Malaysia, 1964; p.37.
2. Malaysia, 1991a; p.25 and 26.
3. Asmah Ahmad, 1994; p.30.

In the 1991 the population of Malaysia was 17,566,982 people, of which 14,127,556 (80%) were in West Malaysia and 3,439,426 (20%) in East Malaysia. The census indicates that the three most populated states were Selangor (2,289,236), Johor (2,074,297) and Perak (1,880,016). While Perlis, being the smallest state in Malaysia had a lesser population of only 184,070 and the Federal Territory of Labuan with 54,307 people.¹ Table 3.2 provides information on the distribution of population in Malaysia according to states during the 1970, 1980 and 1991 censuses.

Table 3.2:

POPULATION OF MALAYSIA ACCORDING TO STATES 1970, 1980 AND 1991

State	1970	1980	1991
Johor	1,277,180	1,580,423	2,074,297
Kedah	954,947	1,077,815	1,304,800
Kelantan	684,738	859,270	1,181,680
Melaka	404,125	446,769	504,502
Negeri Sembilan	481,563	551,442	691,150
Pahang	504,945	768,801	1,036,724
Perak	1,569,139	1,743,655	1,880,016
Perlis	121,062	144,782	184,070
Pulau Pinang	776,124	900,772	1,065,075
Sabah	636,431	929,299	1,736,902
Sarawak	976,269	1,235,553	1,648,217
Selangor	982,090	1,426,250	2,289,236
Trengganu	405,368	525,255	770,931
Federal Territory - Kuala Lumpur	648,276	919,610	1,145,075
- Labuan	17,173	26,413	54,307
Total	10,439,430	13,136,109	17,566,982
Adjusted for under- enumeration	10,811,547	13,745,241	

Source:

Malaysia, 1991a; p.25.

Between the 1971 and 1991 censuses there was an increase of more than seven million people. In 1970 Malaysia had a population of 10,811,547, which by 1980 had increased to 13,745,241. The average annual population growth between 1970 and 1980 was at the rate of 2.3% per annum, while between 1980 and 1991 the growth increased slightly to 2.64% per annum. The average annual population growth varied between states and between the censuses. Table 3.3 provides information on the annual growth rate by state between the 1970 and 1980, and 1980 and 1991 censuses. During 1980-1991, states which experienced high annual population growth rates were Sabah at 5.69% per annum and Selangor at 4.30% per annum. These two states, were also amongst the highest growing states during 1970-1980, with rates of 3.79% and 3.73% respectively.

Pahang and Kuala Lumpur experienced a decline in the rate of population growth during 1980-1991, when compared with the previous 1970-1980 period.

Table 3.3:
AVERAGE ANNUAL GROWTH RATE BY STATE 1970-1980 AND 1980-1991

State	1970-1980	1980-1991
Johor	2.13	2.47
Kedah	1.21	1.74
Kelantan	2.27	2.90
Melaka	1.00	1.10
N.Sembilan	1.35	2.05
Pahang	4.20	2.75
Perak	1.05	0.68
Perlis	1.79	2.18
Pulau Pinang	1.49	1.52
Sabah	3.79	5.69
Sarawak	2.36	2.62
Selangor	3.73	4.30
Trengganu	2.59	3.49
Federal Territory		
- Kuala Lumpur	3.50	1.99
- Labuan	4.31	6.55
Average: Malaysia	2.30	2.64

Source:

Malaysia, 1991a, p.26

Information on population, the number of occupied houses and the average number of persons per household between 1921 and 1991 is shown in Table 3.4. It shows that, as the population increased, the number of houses and number of persons per household also increased. The number of household per house was usually larger than 1, because of extended families. For a period of almost 50 years between 1921 and 1970 the number of occupied houses almost doubled. In 1921 there were 624,928 occupied houses, compared to 1,447,640 in 1970. In 1970 there were more than 1.4 million occupied houses. Then by 1980 there were an additional 915,811 occupied houses with a total 2,363,451 in 1980. Between 1980 and 1991 there was an increase of more than one million occupied houses, bringing the total number of houses to 3,447,597. This indicates that, between 1970 and 1991, there was an increase of two million occupied houses at the

rate of about one million per decade. In contrast, the population increased in that period by about three to four millions per decade.

Table 3.4 also shows that the number of persons per household increased from 4.8 in 1931 to 5.22 in 1980 then decreased to 4.91 in 1991. Two reasons were associated with the decreased of household size in Malaysia: (a) the effect of family planning, and (b) the change of lifestyle and education level where an increasing proportion of women worked than previously.

Table 3.4:
POPULATION, OCCUPIED HOUSES AND HOUSEHOLD DENSITY 1921-1991

Year	Population	Occupied Houses	Persons Per House	Number of Households	Person Per Household
1921	3,457,000	624,928*	4.7*	n.a	n.a
1931	4,438,000	688,421*	5.5*	n.a	4.8*
1947	5,778,000	847,579*	5.8*	1,076,608*	5.2*
1970	10,439,430	1,463,790*	6.0*	1,570,000*	5.21*
1980	13,136,109	2,363,451	5.6	2,516,295	5.22
1991	17,566,982	3,447,597	5.1	3,580,016	4.91

Notes:

1. * figures for Peninsular Malaysia only (excluding East Malaysia because information was not available).
2. During 1921 and 1931 censuses, information was collected on number of occupied houses without information on the number of household (Malaysia, 1964; p.49).

Sources

1. Malaysia, 1964; p.49
2. Ramesh Chander, 1979; p.6
3. Malaysia, 1991a; p.30.

Population Density

In 1991 Kuala Lumpur still maintained its position as the most densely populated area in Malaysia. In 1991 the density was 4,712 persons per square kilometre. In contrast to the last two censuses, the population density in Kuala Lumpur was 2,668 persons per square kilometre in 1970. By 1980 it had increased to 3,784 persons per square kilometre. This confirms that Kuala Lumpur was experiencing a continuing rapid urbanisation process. The next is Pulau Pinang with 1,033 persons per square kilometre. It has continued to be the second most densely populated and urbanised states since 1970. On the other hand the least densely populated states are Sabah and Sarawak in East Malaysia, and Pahang in West Malaysia. Table 3.5 provides information on population density by state in 1970, 1980 and 1991 censuses.

Table 3.5:
AREA AND POPULATION DENSITY ACCORDING TO STATE
1970, 1980 AND 1991

State	Area (sq.km)	1970 Density/ Sq. km	1980 Density/ Sq.km	1991 Density/ Sq.km
Johor	18,986	67	83	109
Kedah	9,426	101	114	138
Kelantan	14,943	46	58	79
Melaka	1,650	245	271	306
N.Sembilan	6,643	72	83	104
Pahang	35,965	14	21	29
Perak	21,005	75	83	90
Perlis	795	152	182	232
Pulau Pinang	1,031	753	874	1,033
Sabah	73,620	9	13	24
Sarawak	124,449	8	10	13
Selangor	7,956	123	179	288
Trengganu	12,955	31	41	60
Federal Territory - Kuala Lumpur	243	2,668	3,784	4,712
- Labuan	91	189	290	597
Total	329,758	32	40	53

Source:

Malaysia, 1991a; p. 29.

In 1991 the population density is 53 persons per square kilometre, increase from the previous two censuses of 32 persons in 1970 and 40 persons in 1980. The overall population density according to the region in 1991 indicates that Peninsular Malaysia had 99 persons per square kilometre, which was higher than the national average. Sabah and Sarawak maintained a lower figure. It is projected that by the year 2020, Peninsular Malaysia will have a density of 102. Therefore, the population pressure will be greater in Peninsular Malaysia than in East Malaysia.

During the 1991 census the average number of persons per household was 4.91. In 1991, Kuala Lumpur had the lowest household size of 4.65, while the highest household size is Trengganu with 5.30 persons per household, Melaka was the highest in 1980 with 5.51 persons per household and Sarawak was the highest in the 1970 census with 5.98 persons per household.

Table 3.6:
AVERAGE HOUSEHOLD SIZE ACCORDING TO STATES 1970, 1980 AND 1991

State/ Year	1970	1980	1991
Johor	5.95	5.50	4.87
Kedah	5.16	5.00	4.78
Kelantan	4.71	4.83	5.08
Melaka	5.92	5.51	4.92
N.Sembilan	5.59	5.24	4.78
Pahang	5.13	5.08	4.94
Perak	5.62	5.23	4.70
Perlis	4.81	4.52	4.59
Pulau Pinang	5.77	5.48	4.99
Sabah	5.26	5.37	5.15
Sarawak	5.98	5.45	4.97
Selangor	5.75	5.33	4.90
Trengganu	4.74	4.89	5.30
Federal Territory			
- Kuala Lumpur	(a)*	4.87	4.65
- Labuan	(b)**	5.54	5.03
Total	5.21	5.22	4.91

Notes:

(a)* The Federal Territory of Kuala Lumpur formed in 1974, was part of the state of Selangor. Data for the household size for the Kuala Lumpur has been included in Selangor.

(b)** The Federal Territory of Labuan formed in 1984, was part of the state of Sabah. Data for the household size was included in Sabah.

Source:

Malaysia, 1991a; p. 31.

HOUSING STOCKS 1970-1991

Housing Stock in 1991

The "Population and Housing Census in Malaysia" uses the term "living quarters" which generally refers to housing. The census defines living quarters as "*...a place which is structurally separate and independent and is meant for living*" (Malaysia, 1992; p.20). This means that a living quarter includes any structure built for the purpose of living and any structure not built for living, but converted or used for living at the time of the census.

In 1991 there were 4,091,790 living quarters of which 3,447,597 (84%) were occupied, while 644,139 (16%) were unoccupied. The 3,447,597 occupied living quarters accommodated 3,580,016 households. This implies that the number of households per living quarter was still more than one household (1.04).

Selangor had the biggest number of living quarters (537,422 units) followed by Johor (503,222 units). But Johor has the highest absolute number of unoccupied living quarters (92,822 units) while the next is Selangor (82,577 units). The two states that have the highest occupancy percentage are Perlis (89%) and Pulau Pinang (88%). While the two states that have the highest percentage of vacancy rate are Negeri Sembilan (21%) and Johor (18%). The high percentage of unoccupied houses was because of temporarily vacant or just being completed while waiting for occupation. The high percentage of vacant houses (21%) in Negeri Sembilan was largely located in the rural areas where owners temporarily migrated to large urban centres seeking better incomes. The following Table 3.7 provides detailed information on the numbers of living quarters and their occupancy by states in 1991.

Table 3.7:

NUMBER OF LIVING QUARTERS, OCCUPIED AND VACANT BY STATES, 1991

State/ Year	Total Houses	Number of Occupied	Number of Vacant	Percentage of Occupied
Johor	503,222	410,400	92,822	81.6%
Kedah	321,439	268,915	52,524	83.7%
Kelantan	264,780	228,443	36,337	86.3%
Melaka	120,604	100,053	20,551	83%
N.Sembilan	179,596	141,942	37,654	79%
Pahang	243,236	204,192	39,044	83.9%
Perak	471,370	388,793	82,577	82.5%
Perlis	44,544	39,663	4,881	89%
Pulau Pinang	228,711	200,089	28,622	87.5%
Sabah	369,515	314,517	54,998	85.1%
Sarawak	365,359	315,957	49,402	86.5%
Selangor	537,422	450,489	86,933	83.8%
Trengganu	165,219	142,798	22,421	86.4%
Federal Territory				
Kuala Lumpur	265,487	231,365	34,122	87.1%
Labuan	11,286	9,981	1,305	88.4%
Total	4,091,790	3,447,597	644,193	84.3%

Source:

Malaysia, 1991a; p.31.

Housing Stock in 1970

The 1970 census concentrated on housing data collection in West Malaysia and was confined only to the major towns in East Malaysia. In 1970 there were about 1.6 million private living quarters in West Malaysia of which 1,463,790 (90%) were occupied and 182,440 (10%) were vacant. Large numbers of living quarters were located in rural areas (76%) while urban areas shared a smaller proportion (24%). The percentages of vacant houses² over the total houses in urban areas were 8% while in rural areas were 10%. Table 3.8 shows housing stock in 1970 and their distribution according to occupancy and states.

In 1970 there were about 1.57 million private households who occupied 1.45 million houses. This implies that several households lived in one house. The average

number of households per living quarter was 1.08. It was reported that about 425,000 households or 27% were in urban areas, whereas the balance about 1.14 million households or 73% were in rural areas. The average number of persons in urban living quarters was 7.1 persons, while in rural areas with lesser people, the average was 5.1 persons. The national average for number of persons per living quarter was 6.1. This implies that in general, a larger number of people lived in rural areas.

Table 3.8:
NUMBER OF HOUSES, OCCUPIED AND VACANT BY STATES 1970

State/ Year	Total Houses	Number of Occupied Houses	Number of Vacant Houses	Percentage of Occupied Houses
Johor	217,392	197,786	19,606	90.1%
Kedah	196,889	177,668	19,221	90.2%
Kelantan	151,301	138,562	12,739	91.6%
Melaka	68,886	62,183	6,703	90.3%
N.Sembilan	92,869	80,450	12,419	86.6%
Pahang	103,890	89,308	14,582	86%
Perak	274,908	248,493	26,415	90.4%
Perlis	26,461	24,727	1,734	93.5%
Pulau Pinang	123,405	112,187	11,218	90.9%
Sabah	(a)*	(a)*	(a)*	
Sarawak	(a)*	(a)*	(a)*	
Selangor	278,291	250,741	27,550	90.1%
Trengganu	91,938	81,685	10,253	88.9%
Federal Territory - Kuala Lumpur	(b)*	(b)*		
- Labuan	(a)*	(a)*		
Total	1,626,230	1,463,790	182,440	90%

Notes:

(a)* The actual number of houses in Sabah and Sarawak was not available because the 1970 census was confined only to major towns in Sabah and Sarawak.

(b)** The Federal Territory of Kuala Lumpur was formed in 1974, was part of the state of Selangor. Data for the household size was included in Selangor.

Source:

Malaysia, 1991a; p 31.

Housing Stocks in 1980

Table 3.9 provides information on the number of houses in the census of 1980 and its distribution according to states. In 1980 there were 2,632,561 living quarters in Malaysia. Out of that total, 2,363,451 or 89.8% were occupied while the other 10.2% were reported vacant. In West Malaysia there were 2,313,440 living quarters that represented 84% of the total living quarters in Malaysia. Comparing with the 1970 census, there was an increase of 687,440 units of living quarters. Over the period of ten years, the annual increase in living quarters were about 68,700 units per annum.

Table 3.9:
NUMBER OF HOUSES, OCCUPIED AND VACANT BY STATES 1980

State/ Year	Total Houses	Number of Occupied Houses	Number of Vacant Houses	Percentage of Occupied Houses
Johor	306,410	273,061	33,349	89.1%
Kedah	234,253	211,803	22,450	90.4%
Kelantan	188,579	173,111	15,468	91.8%
Melaka	87,269	77,000	10,269	88.2%
N.Sembilan	122,352	102,643	19,709	83.9%
Pahang	166,890	144,460	22,430	86.6%
Perak	344,013	312,557	31,456	90.9%
Perlis	33,605	31,339	2,266	93.3%
Pulau Pinang	156,624	144,339	12,285	92.2%
Sabah	182,046	160,977	21,069	88.4%
Sarawak	231,537	211,784	19,753	91.5%
Selangor	285,294	254,232	31,062	89.1%
Trengganu	118,374	104,827	13,547	88.6%
Federal Territory				
- Kuala Lumpur	169,776	156,729	13,047	92.3%
- Labuan	5,539	4,589	950	82.9%
Total	2,632,561	2,363,451	269,110	89.8

Source:

Malaysia, 1991a; p.32.

The ratio of urban housing over rural housing has revealed an increased share of urban housing, while rural housing showed a decrease in its proportion. There were 31%

houses in urban areas and 69% houses in rural areas. The percentage of vacant houses in the urban areas remained the same (8%) as in the 1970 census.

The 1991 census confirms that there were 4,091,790 living quarters of which 3,447,597 units or 84% were occupied while 644,193 (16%) were vacant. The 1991 census showed a higher number of unoccupied living quarters as compared to 1980 census. Out of those more than four millions living quarters surveyed, 3,345,630 units or 81.8% were located in West Malaysia. The percentage of occupied houses to the total number of houses in West Malaysia is 84%. This figure indicates that the percentage of occupied houses in West Malaysia has reduced while the percentage of unoccupied houses increased. A summary table about the number of houses between 1970 to 1991 is presented in Table 3.10.

Table 3.10 shows that number of houses and households increased while household size and household per house decreased. Between 1970 to 1991, the number of occupied houses increased by 1,983,807 while the number of households were increased to 2,010,016. Between 1980 and 1991 occupied houses increased by 1,084,146 and number of households increased by 1,063,721, thus number of households per house have become smaller, from 5.22 to 4.91.

Table 3.10:
NUMBER OF HOUSES, OCCUPIED AND VACANT 1970-1991

Year	Total Number of Houses	Number of Occupied Houses	Number of Vacant Houses	Number of Households	Household Size	Household Per House
1970	1,626,230	1,463,790	162,440	1,570,000	5.6	1.07
1980	2,632,561	2,363,451	269,110	2,516,295	5.22	1.06
1991	4,091,790	3,447,597	644,193	3,580,016	4.91	1.04

Note:

1970's figures represent only for West Malaysia. The number of persons per household size for Malaysia is 5.21.

Source:

Malaysia, 1991a; p. 30, 31 and 32.

A high percentage of unoccupied houses does not mean Malaysia has an excessive housing stock. These houses were found vacant only during the census enumeration day

where about 60% were categorised as temporarily vacant, just completed and waiting for occupation. Eight reasons were reported for the unoccupied houses during the census which includes: (1) houses which were temporarily vacant, (2) houses for seasonal workers, (3) rest houses, (4) houses which were just completed and waiting for sale, rental or occupation, (5) houses waiting for repairs, renovation or rebuilding, (6) houses unsuitable for habitation and for demolishing, (7) houses which were vacant for other reasons, and (8) houses were vacant for unknown reasons.

POPULATION PROJECTION AND INCOME LEVEL

The population of Malaysia is projected to reach 33.7 millions by the year 2020. In the period of almost 30 years to the year 2020 the population is expected to double that of the 1991's. The annual population growth between 1991 to 2000 is projected at 2.23% per annum, between 2001 to 2010 it will be at 2.10% per annum, and afterwards it will reduce to 1.95% per annum between 2011 to 2020. By the year 2000 the population of Malaysia is projected to be about 20.1 millions. This will be an increase of 2.6 millions of people over the 1991 population. In 1984, the government proclaimed the long term target 70 million population by the year 2100 to be achieved through decelerating the decline in the fertility rate. However, it was argued that the country would reach the 70 million population even before the year 2100 (Asmah Ahmad, 1994; p.35). Table 3.11 below provides information on population projection between 1991-2020 and 2100.

Table 3.11:
POPULATION PROJECTION 1991-2020 AND 2100

YEAR	POPULATION	ANNUAL GROWTH RATES (%)
1991	17,567,000	2.36% (1991-1995)
1995	20,198,800	2.23% (1991-2000)
2000	22,585,000	2.11% (2000-2005)
2005	25,094,000	2.10% (2001-2010)
2010	27,808,000	1.99% (2010-2015)
		1.95% (2011-2020)
2015	30,711,700	1.87% (2015-2020)
2020	33,719,100	
2100	70,000,000	

Source:

National Population and Family Planning Board, Malaysia, 1990.

Urban Population:

The census of 1970 to 1991 showed the trend towards an increasing percentage of the total population living in urban areas. In 1980 about 34% of the Malaysian population lived in urban areas and in 1991 the percentage had increased to 43%. With the current rate of urban development and the aim for a rapid growth in manufacturing in the future, urbanisation process will be greater. As a result, a larger proportion of the Malaysian population will live in urban areas. The percentage of the total population living in urban areas is projected to increase to 51% by the year 2000, then 58% in 2010 and finally a further increase to almost 65% by the year 2020. This information is highlighted in Table 3.12 below. The increased percentage of urban population will cause a higher demand for housing in urban areas.

Table 3.12:
URBAN POPULATION IN MALAYSIA: 1980-2020

Year	Total Urban Population	Percentage of Urban Population
1970	2,530,433	27.0%
1980	4,492,500	34.2%
1990	7,720,000	43.0%
2000	11,653,500	51.2%
2010	16,239,800	58.4%
2020	21,845,000	64.8%

Source:

1. International Institute for Environment and Development, 1987; p.261.
2. National Population and Family Planning Board, Malaysia, 1990.

Income

Income gaps imbalances are still wide in terms of and socio-economic and ethnic groups as well as between urban and rural areas. Table 3.13 shows that there are increases of mean and median income from 1970 to 1984 then decline in 1987. There are also differences of income between the urban and rural areas. For example in 1987 the median monthly household income for the national figure was M\$738.00 and the urban was M\$1,004 while the rural area was M\$629. Table 3.14 exhibits the distribution of household income by urban and rural in 1989. This table shows that the median household income for urban areas is between M\$1,000 and M\$1,249, the rural areas between M\$600 and M\$799 while the overall median for Malaysia is between \$800 and M\$999. This mean that in general about 50 percent of the households have income of less than M\$999. In comparison the average household income for 1990 was M\$ 1,167 per month.

Table 3.13:
HOUSEHOLD INCOME ACCORDING TO URBAN AND RURAL STRATA
1970-1987 AND 1990
(in current prices)

	Total		Urban		Rural	
	Mean (M\$)	Median (M\$)	Mean (M\$)	Median (M\$)	Mean (M\$)	Median (M\$)
1970	264	166	428	265	200	139
1973	362	227	570	345	269	184
1976	514	313	830	495	392	262
1979	693	436	975	600	550	369
1984	1,095	723	1,541	1,027	824	596
1987	1,074	738	1,467	1,004	853	629
1990	1,167	n.a	n.a	n.a	n.a	n.a

Note:

n.a.= data not available.

Sources:

1. Malaysia, 1986; p.211
2. Malaysia, 1988; p.215
3. Malaysia, 1991b, p.110.

Table 3.14:
HOUSEHOLD INCOME ACCORDING TO URBAN AND RURAL STRATA 1970-
1987 AND 1990
(in 1990's constant prices)

	Total		Urban		Rural	
	Mean (M\$)	Median (M\$)	Mean (M\$)	Median (M\$)	Mean (M\$)	Median (M\$)
1970	682	429	1,106	685	518	359
1973	874	548	1,377	833	650	444
1976	877	534	1,416	845	669	447
1979	1,061	668	1,493	919	842	565
1984	1,236	816	1,739	1,159	930	673
1987	1,143	785	1,561	1,068	907	669
1990	1,167	n.a	n.a	n.a	n.a	n.a

Note:

n.a.= data not available.

Sources:

1. Malaysia, 1986; p.211
2. Malaysia, 1988; p.215
3. Malaysia, 1991b, p.110.

Table 3.15:
DISTRIBUTION OF HOUSEHOLD INCOME BY URBAN AND RURAL STRATA
1989
(in current prices)

INCOME CLASS	URBAN Percent of Households	RURAL Percent of Households	TOTAL Percent of Households	CUMULATIVE of Total Households
M\$299 and below	3.9	12.0	9.4	9.4
M\$300-399	4.1	10.2	8.2	17.6
M\$400-499	5.5	9.4	8.1	25.7
M\$500-599	6.2	9.7	8.6	34.3
M\$600-799	13.3	16.3	15.2	49.5
M\$800-999	11.6	11.5	11.5	61.0
M\$1,000-1,249	11.4	9.4	10.0	71.0
M\$1,250-1,499	8.9	6.0	7.0	78.0
M\$1,500-1,999	11.6	6.9	8.5	86.5
>M\$2,000	23.5	8.6	13.5	100
TOTAL	100	100	100	

Source:

Economic Planning Unit, Household Income Survey, 1989.

Table 3.16 exhibits mean monthly household income by state between 1985 and 1990. In general the mean monthly increased between 1985 and 1990 was increased. Four states exhibit higher average incomes than the national average: Pulau Pinang, Sabah, Selangor and the Federal territory Kuala Lumpur. Kelantan is considered the poorest state with the lowest ratio of household income to the national average.

Table 3.16:
MEAN MONTHLY HOUSEHOLD INCOME BY STATE 1985-1990

	1985 (\$)	Ratio to National Average	1990 (\$)	Ratio to National Average
Johor	1,098	0.97	1,220	0.97
Kedah	690	0.63	860	0.69
Kelantan	625	0.57	726	0.58
Melaka	1,040	0.95	1,190	0.95
Negeri Sembilan	1,039	0.95	1,162	0.93
Pahang	960	0.87	1,092	0.87
Perak	883	0.80	1,067	0.85
Perlis	692	0.63	852	0.68
Pulau Pinang	1,183	1.08	1,375	1.10
Sabah	1,212	1.10	1,358	1.08
Sarawak	1,033	0.94	1,199	0.96
Selangor	1,590	1.45	1,790	1.43
Trengganu	756	0.69	905	0.72
Federal Territory- Kuala Lumpur	1,920	1.75	2,102	1.68
Malaysia	1,098		1,254	

Source:

Malaysia, 1991b; p.38.

TREND IN HOUSING CONSTRUCTION

Performance in 1970s

The introduction of the New Economic Policy (NEP), with the two pronged objectives of poverty eradication and restructuring of society in order to correct income distribution imbalances in the Malaysian society has shaped public policy on housing. During the Second Malaysia Plan (1971-1975), the government held the strong opinion that building low cost and public housing was the responsibility of government, because the construction of low cost houses did not appeal to private developers (Malaysia, 1971; p.257.) Furthermore, it was one of the programmes to realise the NEP. The plan indicated that federal government should focus on housing development in Kuala Lumpur, while state governments were responsible for implementing housing programmes in each state, with financial assistance from the federal government.

An allocation of federal funds amounting to M\$171.9 million was earmarked for public housing, while several state governments implemented public housing schemes through their State Economic Development Corporations (Malaysia, 1971; p.258). The Urban Development Authority, an agency for urban renewal and redevelopment was formed in which housing development is one of the programmes. Besides these, the government also formed a company to develop housing for public employees. In addition the government allocated M\$16.5 million for housing lower income workers. Overall, during the Second Malaysia Plan almost M\$953.7 million was allocated to implement various housing programmes by the public sector. This was a quite substantial sum amounting to about 10% of the proposed public expenditure during that plan.

These substantial amounts of funding were allocated because government considered that housing the poor was the social responsibility of the government. However, the implementation of the Third Malaysia Plan (1976-80) marked a policy shift by the government because it felt that this responsibility should be shared with private developers (Malaysia, 1976; p.336). This shift of policy has caused greater intervention by government in the housing industry. In achieving NEP objectives the government has regulated the policy of imposing the construction of low cost houses on private developers.

During the seventies there were two five years plans the Second and Third Malaysia Plan. During these the public sector constructed 207,586 houses of which 39,494 or 19% were the public low cost houses (see Table 3.17 and 3.18).

During 1971-1980 the private sector managed to complete 536,414 houses. The private sector's performance was twice as large as that of the public sector. The 1970s witnessed rapid housing development due to strong demand for residential houses. Finance for mortgages was also available widely, including more relaxed conditions and a higher ratio of loans to property value. Housing loans rose by the end of 1971 to \$112.2 million which was nearly three times the level of 1967. In 1973 the approved housing loans increased to \$360 million (N.Jegatheesan, 1979; p.41). This amount increased 3.2 times in nominal price but in 1971's constant price equivalent to M\$342 million only.

Table 3.17:

HOUSING CONSTRUCTION BY PUBLIC AND PRIVATE SECTOR 1971-1975

Sector/Programme	Number of Houses Completed
PUBLIC SECTOR	
Public Low Cost Housing.	13,244
Housing in land schemes	41,965
Institutional Quarters	24,240
Medium and High- price housing	6,627
Sub-total	86,076
PRIVATE SECTOR	
Private developers	64,862
Co-operatives	3,585
Individuals and groups	105,287
Sub-total	173,734
TOTAL	259,810

Note:

The number of houses targetted during 1971-1975 was not available.

Sources:

1. Malaysia, 1975; p.360.
2. Malaysia, 1978; p. 212.

Table 3.18:
HOUSING CONSTRUCTION BY PUBLIC AND PRIVATE SECTOR 1976-1980

Programme	Target	Number of Houses Completed	Achievement: % of target
PUBLIC SECTOR			
Public Low Cost	62,200	26,250	42.6
Land Development schemes	60,000	36,770	61.3
Institutional Quarters	41,300	20,560	49.8
Medium & High Cost	57,300	37,930	66.2
Sub-total	220,800	121,510	55.0
PRIVATE SECTOR			
Private developers	100,000	199,940	199.5
Co-operatives	12,000	4,120	34.3
Individuals/Groups	150,000	159,070	
Sub-total	262,000	362,680	138.4
TOTAL	482,800	484,190	100.3

Sources:

1. Malaysia, 1976; p. 334.
2. Malaysia, 1981; p. 360.

Housing Development 1981-1990

For a period of almost ten years (1981-1990), a total of 706,998 houses were built and completed, of which 406,070 were completed during the Fourth Malaysia Plan (1981-85) and 300,928 were completed during the Fifth Malaysia Plan (1986-1990). The overall achievement in term of targeted units, was 44% for the 1981-1985 and 43% for the 1986-1990 period. However, the percentages of overall achievement of the public sector in terms of meeting the targeted units were slightly better than the private sector. During 1981-1985 the public sector achieved 51% of its target, compared with 39% of the

private sector. Moreover, during 1986-1990 the public sector achieved 65% of its target, whereas the private sector achieved only 37%. (See Table 3.19 and 3.20).

Overall, the public sector's housing performance during the Fourth Malaysia Plan was better than the private sector (excluding groups and individuals) in terms of number of houses built. This was due to the huge allocation invested by the government in the construction sector as well as in housing development. Under the revised Fourth Malaysia Plan a total of \$4066.48 million was allocated for various public housing programmes which represented 8.32% of the total allocation of the said five year plan (Malaysia, 1984; Appendix A). During the same period, the private sector's performance was restricted as the result of higher interest rates, greater difficulty in obtaining bridging finance and restrictions imposed on obtaining financing for house buyers (Malaysia, 1988; p.155)

During the 1980s there were several government interventions in the housing market, aimed at promoting the market and making housing more accessible to lower income groups. In order to promote the housing market, the government made a directive to commercial banks and finance companies to finance the mortgage of 50,000 houses under the 'Special Housing Loan Scheme.' This scheme extend maximum repayment periods to 20 years and an interest rate of 10% per annum for houses costing M\$100,000 and below. Full financing for houses costing M\$50,000 and less was available together with 90% financing for houses priced at more than M\$50,000 (Malaysia, 1984; p.387). In an attempt to make housing more affordable to lower income groups, the government issued a directive to the private sector in 1982 that the maximum sale price of low cost houses should be M\$25,000.

During the first half of the eighties the public performance in housing development was very promising. Then in 1983 housing development experienced a sudden sharp increase. Overall, the construction sector's share of the of GDP increased to 5% in 1983, in contrast to 4.3% in 1980 and 4.8% in 1982. A strong demand for housing was the probable cause of this increase. The revision of housing loan eligibility and the increase in salary among public servants caused strong demand for housing.

Then in 1984 housing development began to slacken due to high interest rates on bridging end financing, long approval processes and weak demand. Weaker demand was associated with the high lending rate charged by commercial banks at 12% per annum

and more stringent procedures for government servants to apply for a housing loan. This was evidenced by the decreased number of houses built in Kuala Lumpur, where the major concentration of housing development was.

The situation worsened between 1985 and early 1988 when the country was facing a recession. Housing development slowed down as a result of fewer people having sufficient disposable income (Malaysia, 1987a; p.116; Malaysia, 1987b; p.59). In 1986, the Special Low Cost Housing Programme (SLCHP) was launched by the government. This programme targeted the construction of 80,000 houses per year for three years. This was to combat recession and to increase GDP by two percent. This housing programme provided incentives to housing developers, such as better treatment by government agencies, flexibility in planning requirements and a greater accessibility to financial facilities. The maximum sale price of \$25,000 was set for this SLCHP.

SLCHP received encouraging responses from private developers. The programme resulted in the construction of 334,600 houses which exceeded the original target of 240,000 units. However, until 1990 the progress of this programme was unsatisfactory; only 83,940 houses or 35% of the target were completed. This slow performance was also associated with the problem of "abandoned houses", in which some of the housing projects were incomplete and abandoned by housing developers. In 1990, there were 277 projects categorised as "abandoned housing projects" consisting of 63,650 houses and 36,130 buyers, with an estimated value of M\$3,630 million (Malaysia, 1991; p.367).

Medium and high cost houses were in less demand between 1985 and 1987 (Malaysia, 1987a; p.68). Developers were faced with the hurdles of high holding costs and cash flow problems which prevented investment in new projects (Sen, 1988; p.15). At the beginning of early 1988 the Malaysian economy showed signs of recovery (Malaysia, 1988; p.84). This initiated interest in property acquisitions. The construction of low and medium cost housing began to improve but high cost housing still seemed oversupplied. Later, towards 1990 the housing market seemed to pickup again with a stronger housing demand and rapid housing construction (Malaysia 1991c; p.91).

Table 3.19:
HOUSING CONSTRUCTION BY PUBLIC AND PRIVATE SECTOR 1981-1985

Programme	Number of Houses Targetted	Number of Houses Completed (1981-1985)	Percentage of Houses Completed
PUBLIC SECTOR			
Public Low Cost	176,500	71,310	40.4%
Housing in Land Schemes	110,010	34,980	31.8%
Institutional Quarters	58,500	25,450	43.5%
Medium & High Cost	53,560	70,160	131%
Sub-total	398,570	201,900	50.7%
PRIVATE SECTOR			
Low-cost housing	90,000	19,170	21.3%
Medium and high price housing	259,470	85,630	33.0%
Co-operative societies	25,260	4,570	18.1%
Individuals and groups	150,000	94,800	63.2%
Sub-total	524,730	204,170	38.9%
TOTAL	923,300	406,070	44.0%

Sources:

1. Malaysia, 1984; p.366.
2. Malaysia, 1986: p. 522.

Table 3.20:
HOUSING CONSTRUCTION BY PUBLIC AND PRIVATE SECTOR 1986-1990

Programme	Number of Houses Targeted	Number of Houses Completed	Achievement: (% of target)
PUBLIC SECTOR			
Public Low Cost	45,800	26,172	57.1%
Housing in Land Schemes	57,500	32,056	55.8%
Institutional Quarters	27,000	11,284	41.8%
Commercial agencies	18,700	22,794	82.0%
Sub-total	149,00	97,126	65.2%
PRIVATE SECTOR			
Ordinary Low-cost	130,400	4,937	3.8%
Special Low Cost	240,000	83,940	35.0%
Medium & High Cost	169,600	107,442	63.4%
Co-operatives	12,500	7,483	59.9%
Individuals/Groups	n.a.	n.a.	
Sub-total	552,500	203,802	36.9%
TOTAL	701,500	300,928	42.9%

Source:

Malaysia, 1991; p.365.

The target for houses to be achieved by the private sector was carried out through consultation between MHLG and the Malaysian Housing Developers Association in each of the formulation stage of the five year plan. These two bodies come to agreement and decided the target to be achieved by the end of the plan. A detailed analysis of the number of houses constructed by the public and private sectors shows that, until 1986 the number of houses completed by the public sector were greater than those completed by the private sector (without taking into account construction by individuals and groups). Nevertheless, from the beginning of 1987 until 1990, the number of houses completed by the private

sector were greater than the public sector. The latter had shown a major contribution to the number of houses built during the first half of the 1980s but this steadily decreased towards 1990.

When comparing the housing sector's performance between the seventies and eighties in terms of capability to deliver houses, there seems to be little change. The total number of houses built was in the region of 700,000 units. Census figures on the number of living quarters show an increase in more than 1.4 million units between 1980 and 1991. The increase in the number of living quarters, within almost the same period (1981-1990) was double the number of houses built. This implies that not all housing construction is captured by the official statistics of the MHLG, because people constructed houses through the informal sector and many other buildings were used for accommodation. Furthermore, compilation of data by MHLG began in 1981 through the reports submitted by housing developers, but data was not added from the increases of houses built by non-developers and located outside the local authority area. Finally, the number of houses built between 1970 and 1980 was based on the estimate.⁽³⁾

Housing Backlog

The housing backlog is a problem in Malaysia, because the number of houses constructed was lower than the targeted. For example, during 1981-1985 it was estimated that 923,300 houses were required. Of these 365,300 units were to cope with the population increase, 273,600 units were for replacement and 284,400 units were to cover housing backlog (Malaysia, 1981;p.364). However by 1986 only 406,070 units were constructed, whereas during 1986 to 1990 out of 835,500 houses required only 300,928 units were completed (Malaysia, 1986; p.526). This suggested that 534,572 houses were unable to be constructed. At present the Sixth Malaysia Plan (1991-1995) requires the construction of a total of 602,723 houses. About 74% of these are due to new demand whilst 26% are for replacement and upgrading (Malaysia, 1991;p.375). In general, the housing backlog in Malaysia is large and this problem is more acute in terms of low cost housing.

HOUSING REQUIREMENTS 1976 TO 2000

Housing requirement is a gross estimate based on the assumption of the normal replacement of housing units and new requirement as a result of the formation of new households. Table 3.21 below shows housing requirements, units targetted and the number of houses built between 1976 and 1990.

It was estimated that, for the period between 1976 and 1980, about 515,000 houses were required which consisted of a 68,000 backlog from the Second Malaysia Plan, and 447,000 houses for new requirements, replacement and upgrading. Although, only 482,800 houses were targeted for that period, 484,190 houses were completed (Malaysia, 1981; p.360). The average housing construction covering from 1976 to 1980 was 96,838 units per annum.

For 1981-1985, under the Fourth Malaysia Plan a total of 923,300 were required of which 284,400 units were to recover backlog, 273,600 units were for replacement and upgrading and 365,300 units were for new requirements. This plan had a target of 923,300 houses. However, at the end of plan only 406,070 were constructed with a shortfall of 517,230. The average construction per annum was also decreased to 81,214 units.

During the Fifth Malaysia Plan (1986-1990) a total of 835,000 houses were required of which 349,300 units were for new requirements and 486,200 units for replacement and upgrading. However, this plan target a lower number of houses than the projected requirements of only 701,500 houses. By the end of the plan, only 300,928 (42.9%) houses were reported as constructed. During the Sixth Malaysia Plan 1991-1995, a total of 602,723 houses is projected to be required. A total of 573,000 units is targeted to be built by public and private sector, while the remaining 29,723 houses are to be built by groups and individuals.

Table 3.21:
PROJECTION OF HOUSING REQUIREMENTS IN MALAYSIA 1980-2000

Year	Total Requirements	Units Targetted	Units Completed
1976-1980	515,000	482,800	484,190
1981-1985	923,300	923,300	406,070
1986-1990	835,500	701,500	300,928
1991-1995	602,723	573,000	
1996-2000	1,114,279		

Sources:

1. Malaysia, 1976: p.334.
2. Malaysia, 1981: p.366
3. Malaysia, 1986: p.527
4. Malaysia, 1991: p.376
5. Ministry of Housing and Local Government, 1987.

Housing Requirements by States

The Ministry of Housing and Local Government has also prepared projection housing requirements between 1986 and 2000 with detail requirements for each state and selected towns in Malaysia. Table 3.22 below shows the summary of housing requirements for each state between 1986 and 1990.

The table shows that three states have a larger number of housing requirements than other states: Johor and Selangor (includes Kuala Lumpur) because of rapid development predicted to take place, whereas Sabah because of a high annual growth rate of population. Table 3.22 also shows that housing requirements decreased slightly during 1991 to 1995 because of lower replacements as the result of sound housing stocks. However, during 1996 to 2000 housing requirements are predicted to increase. Three states Sabah, Sarawak and Selangor are predicted to have a larger number of requirement because of rapid development and formation of new households. Whereas, several states such as Kedah, Perak and Kelantan will require a larger number of housing replacements because more of their houses will be in a deteriorating state.

Table 3.22:
HOUSING REQUIREMENTS BY STATE 1991-2000

State	1986-1990	1991-1995	1996-2000
Johor	81,900	59,931	101,793
Kedah	64,000	41,787	83,060
Kelantan	58,100	57,721	80,941
Melaka	17,100	14,572	16,623
N Sembilan	22,100	22,460	27,128
Pahang	66,100	36,860	120,784
Perak	77,500	58,839	93,293
Perlis	10,300	5,529	12,440
Pulau Pinang	32,000	20,741	42,162
Sabah	107,400	81,448	131,715
Sarawak	75,000	73,974	132,190
Selangor	187,800	100,503	216,363
Trengganu	36,200	28,358	55,783
Total	835,500	602,723	1,114,279
Yearly Average	167,100	120,544	222855

Note:

Estimate for Selangor is also include Federal Territory Kuala Lumpur.

Sources:

1. Malaysia, 1985:526
2. Malaysia, 1991:376
3. Ministry of Housing and Local Government, 1987

CONCLUSION

This chapter has surveyed three key topics; population growth, housing requirements and housing construction between 1970 and 1991. As described earlier, between 1970 and 1991, Malaysia gained population about 7.5 million with the growth rate more than 2% per annum. This high growth rate predicted to continue until year 2010, where after that the rate decrease below 2% per annum. Between 1970 and 1991 also, number of occupied houses increased by two million and number of new households

increased by two million. On average occupied houses and new households increased about 100,000 per year.

Housing needs were increasing every year as the population increased and new households were formed. Housing backlog occurred because there was a gap between housing requirements and the number constructed. This chapter has shown that through various five-year plans, housing targets were set after considering housing requirements. However in 1980s, the number of houses constructed were lower than the targeted units. In general, the number of houses completed by private developers and public agencies varied between the five-year plans. Between 1970-1980 private developers constructed 264,802 houses compare with public agencies' 207,586 houses. Then, in the 1980s private developers constructed 301,119 houses compare with a bigger number of 398,219 by public agencies. Private developers achieved 200% target in 3MP compare with 55% by public agencies. Public agencies' target achievement was better than private developers in 1980s. During 4MP, private agencies achieved 51% compare with 30% of target by private developers. Then in 5MP, public agencies achieved 65% whereas private developers was 37%. Thus, these confirmed that both private and public sectors did not meet their construction target. This also implies that housing industry is slow in responding to housing requirements.

In 1970 about 73% of the population lived in rural areas, but after that urban population showed increasing proportion from 34% in 1980 to 43% in 1991. It is predicted that by year 2020, urban population will increase to 65% out 35 million population. The proportion of urban population will continue to increase in the future and urbanisation process generates competition for urban land. Development pressure will also larger in Peninsular Malaysia because 80% of its population (80%) lived in Peninsular Malaysia while only 20% lived in the less densely populated in East Malaysia.

Both public and private sector played an important role in the provision of houses between 1970 and 1990. During the first half of 1970s there was a clear distinction of responsibility for housing lower income groups was on the government. Change to this stance occurred in the mid seventies when private developers were also required to share the social obligation of providing houses to lower income groups.

The public agencies was capable of delivering houses to the public because of the backing by the government. In the Fourth Malaysia Plan (1981-1985) the number of

houses built by the public agencies were greater than the private developers. However, recession, economic situations and the changed priority in overall government planning strategy affected public housing performance, as evidenced during the Fifth Malaysia Plan.

ENDNOTES

- ¹. Labuan formerly was only one of the districts in Sabah. It was gazetted as a Federal Territory in 1984.
- ² Reasons for unoccupied houses are: (1) temporary vacant, (2) housing for seasonal workers (3) rest houses (4) Just completed; awaiting for sale or for occupation, (5) houses for renovation or repairs, (6) deteriorating, unsafe for habitation and waiting for demolishing, and (7) other unknown reasons
- ³. Information based on interviews with a number of officers involved in the preparation of five-year plan documents at MHLG and Economic Planning Unit, also officers involved in compilation of housing statistics since 1981.

Chapter Four

PUBLIC HOUSING POLICIES AND PROGRAMMES IN MALAYSIA

Introduction

The study of housing is complex, where it goes beyond the understanding of housing merely as a form of human shelter. Housing relates to broader issues of urbanisation, finance, economic, legislation, intergovernmental relationships, socio-politics, social-psychology, planning and public policy, and many other related perspectives. Thus, housing is a complex good that requires government intervention to ensure that the citizen has minimum living standards, including the provision of decent affordable housing.

This chapter assesses housing problems and the efforts adopted by governments in providing houses for lower income groups. The chapter begins with a brief overview of major housing problems in the Third World, developing countries and newly industrialised countries (NIC). Then the chapter moves to the topic on housing policies in Malaysia and aims to highlight some of the pertinent issues and criticisms about housing policies. The chapter further focuses on public housing programme for the lower-income groups; an effort formulated by the government in achieving the objective of providing accessibility to affordable housing for lower income groups in Malaysia. Finally, there is a description of programme implementation process of public low-cost housing programme and some of the problems and issues which have occurred at various stages of the implementation process.

OVERVIEW OF GENERAL HOUSING PROBLEMS

The literature on urbanisation of developing and Third World countries considers the importance of housing policies when analysing the issue of urban development. This is because many cities in the Third World and developing countries are faced with housing

shortages. These shortages are the result of rapid population growth and migration of rural population to urban centres for economic reasons. Poverty and the gap between income and house price impedes the purchasing power of the poor for obtaining decent housing (Abrams, 1966; Grimes, 1976). This gap between dwelling costs and income has become one of the obstacles to progress in housing.

Responding to these problems, a range of housing policy approaches have been adopted by Third World and developing countries governments. In general, these policy approaches can be categorised as: (1) 'the laissez-faire approach', (2) the alarmist approach', (3) the institutional framework approach'; (4) the 'partial approach'; (5) the 'total approach'; and (6) the 'progressive approach' (Johnstone, 1976). The precise nature of these housing policy approaches vary significantly from one country to another and are dependent upon factors such as level of development, economic resources, public agencies' capability, political ideology and the extent of policy commitment to housing the urban poor. The main factors contributed to these housing problems besides urban poverty and resources constraints, are added with institutional constraints and implementation problems.

Public Housing

There are three sources of housing supply for the urban poor in the Third World cities: public housing, private housing and popular housing (Drakakis-Smith, 1987; p.85). Public housing is one of the main types of low-cost housing, as attempt to answer housing needs of the urban poor, which involved government intervention in housing market through the provision of low-cost houses to low-income people. This public housing adopts a conventional approach in housing construction by the public sector that is legally constructed, conforming to building regulations imposed by the local authority, established finance and proper arrangements of construction. This approach is justified as inevitable because the private sector is inclined towards more profitable housing ventures for middle and high income people. This is also necessary in the circumstances where the formal housing financing system disinclined lower-income groups but targeted primarily to higher income households such as for example in Philippines as analysed by Struyk and Turner (1986).

The success of Singapore and Hong Kong in implementing their public housing programmes proved to be a fine model of urban development in answering the housing

needs of lower-income groups. The development of public housing in Singapore is implemented by the Public Housing Development Board (HDB) who accommodate almost 87% of the urban population. The board was formed and took over from the Singapore Improvement Trust in 1960, as an attempt to overcome ineffective legislative power, token financial backing and a lack of implementation ability. During its earlier years, HDB concentrated on efforts to provide basic housing facilities for slum inhabitants in the inner city. After which, the emphasis was on building large scale public housing estates and new towns. The location of public housing estates and new towns form parts of the comprehensive island land-use master plan. HDB adopted the high-rise public housing strategy, redistribution of population to overcome political and racial unrest and demolition of slums in the urban fringes. The massive public housing construction also stimulated economic growth. The planning strategy adopted by the government is a combination of free market economics together with strong centralised control of land development (Teo, 1989). Public housing development also functioning a 'spatial re-organisation' (Wang and Geh, 1987). Factors contributing to the success of this programme include impressive economic growth, legislative power of land acquisition held by statutory agencies that enabled the smooth implementation of large scale development (Wang and Geh, 1987), large scale construction and the advantages of a small city-state (Teo, 1989). HDB operated as a single housing authority developed new townships, set the standards for housing and new townships rather than subjecting their planning to local authorities, held persuasive power, and was very committed and influential upon other authorities. On the financial side, sound wages, high levels of affordability and utilisation of the Central Provident Funds (CPF) have assisted the success of this public housing programme. House buyers are allowed to withdraw their savings from the CPF towards the housing purchase. Monthly instalment is paid in a portion by house buyers and another portion by CPF from buyers' contribution (Singapore, 1991; p.91).

In Hong Kong out of 1.6 million permanent housing stocks, 46% are public housing (Hong Kong Housing Authority, 1990). On assessing the housing policy in Hong Kong, Keung (1985) found that the government's intervention through the building of public housing was necessary to overcoming housing problems and meeting the people's need.

Despite the success story of Singapore and Hong Kong, in other parts of developing and Third World countries faced with some of the drawback of this public housing approach. Although public housing plays an important role for a source of

housing supply to the urban poor, this "reactionary policy" removed slums and control squatters via relocation to public housing. Many public housing programmes were criticised for adopting an "alien policy" because of their use of western planning principles and designs: as evidenced by the construction of high-rise public housing, a waste of resources on expensive projects designed to impress electorates rather than meet any real needs, and influence by the bias values of bureaucrats which alienated lower-income groups (Drakakis-Smith, 1981; p.45, 1987; p.100). This type of housing usually costly with a high rental and other incidental costs which beyond the financial capabilities of the poor. Eventually, this low-cost housing accommodated middle income families instead, who could afford to meet the financial consequences.

The Non-Conventional Approach

In other parts of Third World and developing countries other approaches have been adopted such as providing infrastructure services and facilities, maximising investment potential of scarce resources, prevent wastage of resources, and organising the poor into integral urban development through site and services and slum improvements. Contrary to the public housing approach, the popular housing approach such as aided self-help has been adopted as the response to the shortage of affordable housing for the urban poor. The 'popular housing' or 'non-conventional' is an 'informal' housing constructed by the poor themselves, illegitimate to a certain extent and sub-standard by established building regulations. Popular housing is built outside the formal private and public housing production system by owners themselves, often with the assistance of family and friends. These uncontrolled settlements grow in size and are sometimes difficult to improve, let alone remove (Jogensen, 1977; p.29). That is why spontaneous shelters growing more rapidly than public housing. The lack of financial capability many of developing countries to overcome this housing problem is because they have given higher priorities to investment in industry and agriculture, as these provide economic independence from other countries, as well as creating income for local people. This explains why there is a lack of planning and housing policy in most developing countries (Jogensen, 1977; p.29).

Johnstone (1976) views 'laissez-faire approach' of housing policy adopted by some developing countries helps the private sector to concentrate on housing development for the more profitable middle and high classes. Thus, the urban poor have to fulfil their housing need by their own means and through spontaneous development. In these circumstances, self help buildings such as sites and services and upgrading of squatters

accommodation are the best possible solutions to housing problems, as advocated by Turner.

Impediments to Housing Programme Implementation

Formal housing programmes faced difficulties because they have to fit within the bureaucratic process of various departments of states. Inter-departmental relationships have often slowing down programme's performance. Public housing and other housing for lower-income groups thus suffers from lengthy delivery process. This problem is experienced in many countries, whatever the level of development. In the USA, one writer observed that this process takes a long time (Fuerst, 1974; p.187). Another writer pointed that housing construction in Egypt was associated with lengthy negotiation procedures, lack of political will, inadequate cost recovery, unsuitable site locations, and incorrect implementation process (Soliman, 1988). In Cameroon, Njoh (1992) revealed a weak institutional capacity for housing policy administration. He asserted that the persistence of housing problem in Cameroon is not a lack of resources, but a function of institutional constraints. These institutional constraints include; inappropriate inter-organisational models, unnecessary fragmentation of functions, inadequate inter-organisational interaction, lack of systematic research, poor urban design practices, and high housing standards. These problems are rooted in two factors. First, the adoption of western administrative model; and, second the protection of economic and political interests, which foster ideological belief. In addition, Njoh (1992b) highlighted the factors responsible for institutional impediments on private residential development in Cameroon because of: (a) too many agencies or institutional actors; (b) excessive centralisation; (c) backward administrative practice; (d) unrealistic official pre-conditions for building approvals, and; (e) vague law and bye-laws for building development. He states that the process required to obtain land title for the building which involved too many complicated steps, and was costly for ordinary people. The urban land system favours towards middle class groups.

The popular sector, especially sites and services and upgrading, have been accepted as a better approach because it matches the priorities, needs and ability to pay of low income groups. Also, this approach has utilised a limited governmental funding and made use of more resources from the participants themselves. However, this popular sector has not been encouraged or gained a wider acceptance as an approach to answer

the housing needs of low-income groups in Malaysia. A number of reasons are associated with this. First, urban land is scarce and expensive; the policy is geared towards encouraging higher density land use through the formal sector (Sendut, 1983; p.79; MHLG, 1982). Second, there is resentment by land and local authorities to accept this approach. The land authority puts great emphasis on the provision of law which restrains it from legalising illegal squatter. Local authorities, on the other hand, are concerned with imposing planning and building laws where informal housing construction is viewed as non-conformist (Idris, 1993; p.19 - 21). When sites and services were proposed, local authorities demanded higher standards of planning, infrastructure and amenities that resulted in higher development costs and defeated the aim of low development cost (MHLG, 1991a). Third, this popular sector is politically unacceptable as it demonstrates the incapacity of the government to provide better and completed houses (Linden, 1991; p.223). An extensive study of sites and services was carried out for the government in 1979. However, the study's recommendations were not accepted by state governments as a solution to meet the housing demand of the low-income groups (MHLG, 1979). These 'uncompleted houses' are politically viewed as inappropriate to the government intention of providing complete products and opposes the statements and promises to provide a better life for the people (MHLG, 1991b). Finally, the success of its neighbour, Singapore, impress Malaysia and led to a belief that a similar approach to a certain extent could be emulated. The formation of a National Housing Board was proposed to implement a more extensive public low-cost housing programme (MHLG, 1991) and as a mechanism to attain housing policy goals for lower income groups (NST, 17.1.1993). These reasons as described above explain why the Malaysian government prefer a formal approach to low-cost housing by being directly involved in the construction through various programmes and through joint-venture projects with housing developers, or imposing requirements on the private sector building low cost housing.

HOUSING POLICIES AND DEVELOPMENT IN MALAYSIA

Malaysia is adopting "house owning democracy", the policy which aims to provide all Malaysians access to housing with emphasis on affordable housing for the lower income groups. To achieve this objective, the government is emphasising the free market by encouraging significant roles for the private sector for conventional housing development. The government also undertakes housing development through several public housing programmes and by its public corporations and government companies.

Although the housing policy is encouraging free enterprise, a certain degree of control is imposed on the housing industry through several regulations, policy directives and interventions by government.

The government has also adopted the policy of not controlling the house price except for low cost houses which was fixed at a maximum price of M\$25,000 since 1982. The concept of *low-cost houses* in Malaysia is loosely defined by the houses with a selling price of not more than M\$25,000. These houses usually have floor areas of between 45 and 56 square metres, with two bedrooms and are targeted for lower income groups of M\$750.00 per month and less. On the other hand *low-medium cost* are houses with price between M\$25,0001 and M\$50,000, whereas medium cost houses are with the prices between M\$50,0001 and M\$100,000. All houses with price above M\$100,000 are categorised as high cost housing (MHLG, 1984).⁽¹⁾

Private Sector Participation

The roles of private sector especially private housing developers are significant in supplying houses in Malaysia. Between 1971 and 1990, private housing developers had built about 566,000 houses. Private housing developers through their association, Housing Developers Association of Malaysia (HDAM), have close co-operation with the Ministry of Housing and Local Government (MHLG). This is in line with the policy of "Malaysia Incorporated" that encourages a close co-operation between the private sector and the government, aimed at bringing benefits to the people and the nation. The Malaysia's Second Outline Perspective Plan also stated an enhancement of the roles of the private sector in the national economy and by providing support from the government sector (Zain, 1993; p.92).

The role played by the private sector since the 1980s was considered as 'the primary engine of economic growth' in Malaysia (Mahathir Mohamad, 1991). In relation to this, the government emphasised the importance of private housing developers in fulfilling the housing targets which were considered as a significant contribution to the nation (MHLG, 1983; p.2). Also the success of the low-cost housing targets depended on the co-operation provided by the private housing developers (NST, 6.5.1993).

In each five-year plan, housing targets for private developers were set after consultations between the government and HDAM (HDAM, 1990). The important role of the private sector in supplying houses is marked by the increasing targets of houses for private developers in the five year plan. The number of houses aimed for 3MP were 100,000 then in 4MP increased to 349,000, in 5MP further ascending to 540,000 and finally in 6MP only 386,400 houses.

In 1979 a National Consultative Council for Housing (NCCH) was formed. This aimed to provide a forum between organisations involved in the housing sector and the government. This committee includes representatives from the Housing Developers Association of Malaysia (HDAM), Masters Builders Association, Association of Bankers, Institute of Engineers and Architects Association on private sector side and the government, particularly MHLG and Treasury and several other related ministries and agencies. This forum aimed to provide a useful platform for the private sector's contribution in public policy relating to the housing industry (MHLG, 1983; p.2).

Two issues are identified in connection with these private housing developers. First, they concentrated mainly on building medium and high cost housing because this segment of housing provides more lucrative profits than low cost housing. Prior to 1980, private developers built only a small number of low cost houses. Government intervention through various policy measures have compelled private developers to build more low cost houses as a part of the requirements for housing development. Between 1981 and 1990, out of 314,241 houses built by private developers 100,379 (32%) were low cost housing (MHLG, 1992; p.9). In 1990, out 95,040 houses sold by private developers 41,126 (43%) were low-cost houses. This increased number of low-cost houses by private developers was partly contributed to by 83,940 special low-cost houses completed by 1990.

Secondly, the private housing developers limited funds forced them to rely on bridging finance from banks and financial institutions (Ghazali, 1992; p.6). Bridging finance means short term loan facilities to bridge the gap between immediate cash requirements and anticipated receipt of funds at a future date while waiting for progress payment from house buyers. Records obtained from the MHLG showed that on average the paid-up capital of these private housing developing companies were less than M\$1,000,000 (MHLG, 1990; p.87). Because the amount of funds from private housing developers were small, inevitably they had to rely on the bridging financing provided by

banks and financial institutions whose imposed interest rates were eventually passed on to house buyers.

Laws and Regulations

In Malaysia conventional housing development is subject to various laws and regulations by federal, state and local governments. The most important is the law relating to land which is vested in the states government. Land is a state matter, thus the manner of its implementation is dependent upon states. This implies that the success and failure of Malaysian housing policy thus lies in the hands of individual state government. Approval for housing development is also subject to local authorities. In this respect co-ordination of housing policies in Malaysia is subject to the trichotomy of the system of federal, states and local government .

There are 34 laws and regulations in connection with housing development. The major laws are National Land Code 1965, Strata Titles Act 1985, Housing Developer's Act 1966, Housing Developer's (Control and Licensing) Rules 1970, Town and Country Planning Act 1973, and Street, Draining and Building by-law 1974. These laws and regulations are related to land matters, planning approvals, building permissions and the control of housing developers. This to an extent implies positive and negative aspects. On the positive side, the housing sector is being regulated to ensure health and safety in compliance with planning and building standards and to safeguard public interests. However, on the negative side, this can be considered as heavily regulated. In obtaining approvals and clearance of these laws and regulations, inevitably developers are dealing with government agencies, which may face them with red-tape and bureaucratic delays. These regulations are also directly causing increase in house prices (World Bank, 1989).

Housing Developers Licensing.

A housing developer is required to obtain a license from the Ministry to venture into business and the advertisement of house sales must first be approved by the MHLG to ensure certain procedures and ethics are followed. Housing Developers (Control and Licensing) Act came into effect in July 1970 where the law required any person desirous of constructing four or more houses to obtain a license from the Ministry of Housing and Local Government. For a company, it needed to have a paid up capital of \$250,000 whereas for individuals it was required to deposit M\$100,000 with the Controller of

Housing. The rules were amended in June 1982 which brought substantive changes principally, the adoption of a standard sales and purchase agreement when purchasing houses from private developers. Also housing developers were required to obtain a permit of advertisement and sale of houses. These rules aimed to impose control and to regulate the housing industry and to protect consumers from scrupulous developers. In 1991, there were 4,823 registered private developers in Malaysia. In 1990 alone, MHLG approved 1,134 licenses consisting of 564 new housing developers while the remainder were renewal cases (MHLG, 1992).

Government Interventions

Intervention is the involvement of government in regulating the housing market with specific aims or as a result of certain circumstances. These are carried out by (a) imposing broader national policy into housing sector such as the New Economic Policy, (b) imposition of certain requirements through housing development approvals (c) regulating the market through housing finance control.

The New Economic Policy

New Economic Policy (NEP) was incorporated into the housing programme during 2MP where the national housing programme emphasised the overriding objective of promoting unity through an integrated multi racial community (Malaysia, 1971; p.257). Dissatisfaction over economic disparity amongst ethnic groups caused the incident of bloody racial riots on May 13, 1969. These brought about a transformation in the policy stand adopted by the Malaysian government. In the aftermath of the riots, the government undertook a radical reconsideration of economic development policies which aimed for the improvement of income levels for all groups in the society and in particular which would widen the economic opportunities for the '*bumiputra*' (the indigenous or Malays in particular) in the rural and urban areas. The over-riding objective was enhancing national unity amongst various ethnic groups, and the government strategy achieving this goal incorporated a new economic policy (NEP). The objectives of NEP were "to reduce and eventually eradicate poverty by raising income levels and increasing employment opportunities for all Malaysian, irrespective of race." The second objective was set "...to accelerate the process of restructuring Malaysian society to correct economic imbalance so as to reduce and eventually eliminate the identification of race with economic function." (Malaysia, 1971; p.1). This NEP is applied in all government policy formulation and

implementation including housing and property ownership. Specifically this NEP involved imposition of conditions to housing development such as:-

- Private developers are required to allocate a quota of at least 30% for of all types of residential and non-residential property development for purchase by *bumiputras*.
- At least 30% of all unit constructed within projects shall be low-cost houses, to be sold at pre-determined maximum price, in the 1970s between M\$18,000 to M\$20,000 then starting from 1982 not exceeding M\$25,000. This is to enable lower income groups to afford this price range. The control of sale in some states is closely monitored by the states government.
- To hold all units for sale to *bumiputras* for a minimum period of six months from the date of offer for sale of any project. Exemption from state authority is required to sell this units to other *non-bumiputra* buyers.
- In addition, special discount of five percent of the house's price is also given to *bumiputras*.

Through this NEP the government has attempted to achieve housing ownership that reflects racial balance. Table 4.1 below provides information of the total number of houses sold by private developers to *bumiputras* and other races between 1976 and 1990. The total sales to *bumiputras* were only 20% and still below the minimum 30% target. However, the percentage of sales to *bumiputras* is increasing from 14.8% in 3MP, to 33.3% in 4MP and finally 34.2% in 5MP.

Table 4.1:
THE SALES OF HOUSES ACCORDING TO BUMIPUTRA AND OTHER ETHNIC
GROUPS 1976-1990

Plan and Year	Total Sales	Bumiputra	%	Other Ethnic	%
3MP 1976-1980	185,212	27,483	14.8%	157,729	85.2%
4MP 1981-1985	137,348	45,759	33.3%	91,589	66.7%
5MP 1986-1990	251,495	86,047	34.2%	165,448	65.8%
Total	574,055	118,105	20.8%	414,766	79.2%

Source:

MHLG, Private Sector Housing Report, 1986.

MHLG, Housing Bulletin 1981-1988, 1989 and 1990.

Imposition of additional requirements for development.

The government also imposed several other conditions for housing development such as requesting housing developers to build infrastructure, to build oxidation ponds which are to be maintained by developers until such times as they are taken over by appropriate authority, to construct certain facilities or in turn to pay contribution fees to utility agencies such as for drainage and sewerage, telecommunication, water and electricity. These practises were aimed to lessen the burden of public funding as the result of private housing development. However, if the standards imposed are higher than necessary and becoming over-burdened to housing development, they may cause an increase in house prices and discourages ventures into the housing sector.

Regulating Through Housing Finance

In Malaysia housing finance is provided by government and the public sector. The government provides loans to: (a) public employees through the Treasury Housing Loan Division; (b) state governments to construct public low cost houses which in turn allow low-income groups to purchase these houses with the interest rate charged at 5.5% per annum, and; (c) to lower income groups building houses on their own land with the maximum loan of M\$7,500 from MHLG⁽¹⁾. Housing finance by the private sector is provided by: (a) commercial banks; (b) finance companies, and (c) building societies. Private sector's financial institutions provide short term loans to housing developers in the form of 'bridging finance' and long term loans to house buyers known as 'end financing'.⁽²⁾

Several policy measures and government actions through housing finance have directly and indirectly affected the housing development scenario in Malaysia. Intervention and regulation through housing finance have brought positive and negative effects to the housing sector. For example in 1980, there was a decision to freeze housing loans aimed to curb housing speculation and reduce the spiralling house prices. At the same time this policy has slowed down the housing industry because it reduced the number of potential house buyers. The government intervened the housing market by re-setting eligibility criteria for housing loans from government (the Treasury's housing loan), banks and financial institutions. To be eligible for housing loans (a) the applicant must be at least 30 years old; (b) neither the applicant or his or her spouse should have any previous mortgage. This restricted the housing market to a smaller number of buyers all with an age of at least 30 years and without any previous mortgage. The government also imposed property gain taxes on sales of property within less than five years from the date of purchase as an approach to discourage housing speculation.

In 1970 the government began providing housing loans to public sector employees to purchase houses. These loans were at 4% per annum interest rate repayable over 15 years, as against the 9% interest rate charged by the banks and financial institutions. This repayment period was extended to 20 years in 1980. This action by the government caused increased demand to purchase houses by public employees that in effect was associated with a "property boom" in the 1970s (Sen, 1988). The subsidised housing loans for government employees through the Housing Loan Division of the Treasury is one of

¹ Between 1981 and 1990, 2,753 loans were provided by MHLG under this programme (MHLG, 1992; p.4)

the contributory factors of the housing boom in the early 1970's and continues to play a very significant role in the housing industry in Malaysia until today. On the contrary, when the government continued its imposition of a 'partial freeze' on housing loans in 1982, coupled with the rise in interest from 4% to 6% effective from 24th October 1986, it dampened the housing market (Malaysia, 1987; p.68). When the government later relaxed the restrictions and reduced the rate to 5%, to a certain extent there was evidence of an increase in housing demand (Bank Negara, 1991; p.150; Sen, 1988; p.17).

To assist the low-income groups in obtaining housing loans, in December 1976, the government directed Employment Provident Funds (EPF) to channel its funds to Malaysian Building Society Berhad to disburse housing loans for houses costing below M\$20,000 at 5.5% interest per annum that would be repayable within 20 years. EPF also provides 'partial housing finance', where the government has set a policy allowing withdrawal of savings from EPF in line with the objective of promoting house ownership. This policy aimed to assist EPF contributors for partial financing in purchasing of houses (Dom Karto, 1993; p.57). The government allowed EPF contributors to withdraw their savings up to a maximum of M\$10,000 for the purchase of low-cost houses. Whilst for purchasing other types of houses, contributors are allowed to withdraw 45% of their total savings or 20% of the house price subject to a maximum of M\$20,000, whichever is lower.

Until 1993, EPF contributed a significant sum of M\$5.44 billion toward the provision of 'partial financing' through direct withdrawals and housing loan mortgages through the two building societies, Malaysia Building Society Berhad and Borneo Housing Mortgage Finance Berhad. Between 1977 and 1990 EPF provided 240,144 withdrawals for purchasing low cost houses, another 397,569 withdrawals for other types of houses, and also provided mortgages for 8,673 houses.

In the middle of 1986 the government launched the Special Low Cost Housing Programme (SLCHP) which aimed to build 240,000 low-cost houses, over the following three years as a measure to boost the economy and reduce the recession. To encourage prospective buyers the government through Bank Negara issued new guidelines for housing financing to commercial banks to allow: (a) extending repayment period to a maximum of 30 years; (b) lowering the interest rates for bridging finance and end financing; (c) standardising all financing documentation, loan evaluation processes and procedures; (d) revising and relaxing purchasers eligibility and ability criteria for loan

approvals; (e) establishing of several standing committees on housing finance both at the state and federal levels dealing with all aspects of housing projects particularly referring to SLCHP, and; (f) expediting processes of financing for SLCHP both for bridging financing and end financing. This policy encouraged private sector venture into low-cost housing (Malaysia, 1987(a); p.59).

In summary, the government intervention in the housing sector through regulating and specific actions relating to housing finance has affected the housing development in Malaysia.

PUBLIC SECTOR HOUSING CONSTRUCTION

The public sector is also involved in the supply of housing through various programmes and agencies. The construction of housing by the public sector usually aims to provide housing development in tandem with new town development, new frontier development and land scheme development, and to provide housing for low income people. The public sector's involvement in housing aimed at reaching the low income groups and to construct houses in areas that are not lucrative to the private sector (Agus, 1992).

Many public corporations and government companies were established as the result of the formulation of the NEP which aimed to correct economic imbalance amongst ethnic groups. The property boom in 1973-1975 also brought many public agencies ventured into housing development, such as the State Economic Development Corporations (SEDC), Urban Development Authority (UDA), Council of Trust for Indigenous People (MARA), Perbadanan Nasional (PERNAS) and many others, as an approach realising NEP and focused on urban areas. The original emphasis was to supply low-cost houses, but later it involved the construction medium and high cost residential development or even shop houses. This caused direct competition and overlapping roles with the private sector in building houses especially in urban areas. Between 1971 and 1990 the public sector constructed a total of 506,602 houses through various housing programmes. Between 1981 and 1990 public sector constructed 155,663 houses of which 19,832 (12.7%) were commercial housing built by SEDCs and the Urban Development Authority.

Shift of Policies in Housing Development

In general there were major policy changes in housing development. First, there was a shift of policy stance in relation to the provision of low-cost houses; from purely the public sector to a sharing of responsibility with the private sector through the imposition of NEP and technical requirements. Second, there was an emphasis on greater roles of private sector and privatisation policy in achieving government objectives. Beginning in 1986, a number of state governments and private developers carried out joint venture projects for low-cost houses. State governments provided land while the private developers provided other capital and management to implement the project. To assist the joint-venture and privatisation projects, government helped to expedite the approval process through a 'one stop agency' which started in 1986. However, these projects also faced problems and difficulties in finding suitable sites, obtaining technical expertise, fulfilling technical requirements imposed by local authorities, obtaining competence contractors, high costing in constructing basic infrastructure, removing squatters and in implementing projects which were proposed on ex-mining land. Projects also faced difficulties of obtaining end financing for house buyers (Omar, 1993; p.129 and 133). Third, the government provided three more special types of funding for low cost housing development: (a) funds to revive the abandoned housing projects (FRAHP) formulated in June 1990; (b) funds to accelerate construction of low-cost houses (FACLCH) formulated in November 1994, and; (c) the low-cost housing revolving development fund (LCHRDF) set up in August 1994.

In 1991 a fund of M\$600 million was allocated aimed at assisting private developers and financial institutions to revive abandoned housing projects (Malaysia, 1992; p.91). Since this scheme was launched, 53 projects with a total of 12,363 houses involving 9,885 purchasers have been successfully revived. By the end of 1995 a total of 82 projects comprising of 25,040 houses were approved to utilise this fund amounting to M\$286 million. The fund to accelerate construction of low-cost houses (FACLCH) was created to assist low-cost apartments for rental in urban areas. A total fund of M\$1,604 was made for this purpose. On 31.8.1995, a total of 16,484 houses had been approved for construction utilising this fund and another 8,451 houses were under construction. Finally the low-cost housing revolving development fund (LCHRDF) with an allocation of one billion ringgit was set up aimed at supplementing financing for private developers construction in low-cost houses (Malaysia, 1995; p.92).

These changes of policy stance and the provision of special funding denotes two important points: first, the emphasis on housing construction by the private sector, and secondly, the emphasis on the construction of low-cost houses for lower income groups.

CRITICISMS OF HOUSING POLICY

In general the government should be praised for the number of successes. The government has brought private developers into low-cost housing construction through intervention and the imposition of certain development requirements. The government also stimulated the housing industry through provision of public employees housing loans and partial financing through EPF withdrawals. The decision on partial freezing of housing loans and imposing property gain tax accomplished its intention of curbing housing speculation and price spiralling. The launch of the 'special low-cost housing programme' contributed toward the increased number of low-cost houses available for lower-income groups. The regulation and intervention of housing industry has protected consumer interests. Yet housing policies in Malaysia are not without critics. One criticism is on the issue of division of power between federal, states and local authorities where this can be a problem area in implementing housing policies. The federal government has to co-ordinate policies which must be implemented by 14 state governments and more than 80 local authorities. Another criticism is that the government is concerned with the achievement of targets which emphasise quantity rather than quality aspects. There are many quality aspects to be improved especially concerning low-cost houses.

Government regulations and impositions of certain standards are partly responsible for price increases. It is sometimes difficult to comply with high standards imposed by local authorities when building low-cost houses with a maximum allowable selling price of M\$25,000.

Although there is delineation between different government corporations and also with the private sector in housing development, there is competition and an overlap of functions in the urban areas. Thus, clearer delineation of functions between private and public sector in the urban areas must be formulated. It was criticised that the presence of numerous federal agencies who have stakes in housing and simultaneously the existence of thirteen states who have power in housing, have shaped the present administrative machinery in housing and created a number of constraints in the process of implementation. The three constraints are: duplication of activities between these different

agencies, lack of organisational and functional co-ordination between housing related agencies and the tendency for rivalries between agencies (Abu Hassan et al., 1982).

Johnstone (1984) criticised the increased roles of state agencies in providing houses for the masses because the much of the focus of these agencies was on the high and middle-income groups and they failed to supply houses for the need of the lower-income groups. Johnstone stated that although the government has introduced some urgency into the provision of housing especially for the urban poor, the disparity seemed to continue to grow because of the ineffective solution and the expansion of the capitalist economy which only facilitates the construction of higher cost conventional housing. He supported the policy to improve the unconventional housing sector as a means to overcome housing demand for the urban poor.

The government policy on housing developers licensing has been criticised in two ways. First, private developers are required to comply with the licensing requirements whereas public agencies are exempt because their own acts empower them to venture into housing development. Secondly, the housing developer acts and regulations stress only a minimum paid-up capital of M\$250,00 without other eligibility criteria to become housing developers. The problem of abandoned housing projects has provided a good lesson for the quest for more stringent criteria to find more capable and reliable developers. Improved criteria must be imposed for potential housing developers in order to gain confidence from the public.

The control of prices of low-cost houses and the lower rate of interest on them in the short term affect developers and financiers, but these costs eventually are passed on to other house purchases where the price is not controlled or even to other sectors of the economy. Therefore efforts to co-ordinate the acceptability of not imposing more than the necessary standards must be co-ordinated by MHLG. A study by the World Bank found that the housing subsidy is large in Malaysia but failed to reduce the price of houses because of the regulatory costs, the result of several requirements imposed on housing development (World Bank. 1979). It was argued that cost can be reduced if the government is willing to review these regulatory impositions.

The housing policy in Malaysia involved many players. MHLG as a single ministry with limited power proved it too large to control housing policies with many states, local authorities and other entities. Some of the decisions and guidelines made by MHLG are

sometimes found not to be accepted by other agencies. However, MHLG can play a leading role in persuading states and local governments because MHLG is also in charge in co-ordination of local government and channelling various annual grants to local authorities. MHLG is also in charged of matters relating to planning and fire departments. These can to an extent influence states and local governments revising their standards to accept a more flexible housing development. Frequently, complaints made by housing developers about different standards set by local authorities and 'guidelines' on housing programmes set by the ministry were not honoured by local authorities e.g. the reluctance to accept reduced standards on a narrow back lane. Housing developers request better housing incentives, clearer policy on the housing mix of medium and low-cost and review of regulations and regulatory practises.

The Malaysian economy has progressed from a purely dependence upon the agricultural and primary sectors to diversification and expansion in manufacturing activities during the country's transition into a newly industrialised country. Economic growth throughout the 1970s to 1990s and the urbanisation process have caused a strong demand for housing. This has been assisted by the availability of mortgage facilities provided by the government, banks, financial institutions and building societies. In summary three main strands of housing policy in Malaysia can be reflected as follows:-

- The government recognises and encourages the roles of the private sector, especially housing developers, in housing development. Their contributions are important especially in the attempt to achieve housing targets which are fixed in each five-year plan. The roles of these private developers are enhanced by the existing housing development system, supported by a well developed formal financing system and the system of housing purchase through progress payments.
- The government regulates and intervenes in the housing market by enforcing the provision of laws, regulations and policy directives. Regulating takes place through laws related with land, planning, taxation and licensing. Intervention in the market takes the form of public corporations supplying housing and regulating the housing finance.
- The government participates in housing construction with emphasis on low-cost houses for lower-income groups.

HOUSING FOR LOWER-INCOME GROUPS

After reviewing the housing policy in Malaysia, this chapter focuses on housing policy for the low-income groups and specifically assessing the public low-cost housing programme as one of the public programmes to provide houses for low-income groups in urban and rural areas.

Several policy statements in Malaysia's 'five-year plans' emphasised that the government is concerned with the objective, policy and strategy to meet the housing needs, of low-income groups. Several efforts have also been made to bring prices within the range of low-income people (Malaysia, 1976; p.330). These include the imposition of maximum selling prices, a low rate of interest, cross subsidisation in mixed housing development, directives to financial institutions to provide loan facilities and many other measures. In 1982 the government made a significant policy decision, to limit the selling price of a low-cost house to a maximum price of M\$25,000. Even in 1996 the government is still imposing the same maximum price, although under pressure to reconsider its decision.

The low achievement of housing development during the period of the five-year plans made the government aware of the nation's inability to meet the demand for, particularly low-cost housing. The government acknowledged that "*...so far undertaken has not been able to reach the low income masses of the population who are in dire need of housing facilities*" (Malaysia, 1976; p.335). Implementation capacity was identified as the core of the problem.

Criticisms of the Housing Policy for Low-Income Groups

One of the main criticisms made of this policy was the inadequate supply of affordable housing to low-income groups as the result of public housing programmes failing to meet their pre-determined targets in each of the five year development plans (Johnstone, 1983,1984; Agus, 1986, 1986/87, 1989, 1992; Saidi and Yunus, 1991, p.15). Agus (1989, p.108) rated the public housing programme's performance during the various five year plans as ranging from '*deteriorating*', and '*very poor*' to '*the worst*'.

Johnstone (1976, 1979, 1983, 1984), who carried out extensive studies on urban housing policy for the poor in Peninsular Malaysia made the dominant criticisms. He

argued that the housing policy and the structure of the housing industry failed to reach lower-income groups effectively, because of the nature of housing policy and its support for "conventional development". The industry was also highly concentrated into larger cities and was catering only for a small portion of the population and controlled by a small number of integrated companies (Johnstone, 1984). The government's policy on housing, as it is developed, has supported and facilitated the expansion of the urban economy by encouraging construction of higher cost housing and "...clearing of squatter settlements to make way for 'modern' development" (Johnstone, 1983; p. 269).

Johnstone (1984) criticised that the complications of housing policy in Peninsular Malaysia which has been surrounded by the problem of uneven characteristics of housing provision in social and spatial terms. Inadequate housing supply for the lower-income group occurred because of large scale housing developers concentrating on more profitable ventures building high cost houses in large urban areas. This has resulted in a lack of cheap accommodation constructed through the "conventional sector". He argued that the overall housing system, economic environment and related legislation had enabled capitalists to operate in an opportunist manner. These private developers consisted of a few larger private companies, belonging to a diversified interest originating in agriculture and mining, and also with considerable foreign equity. They also had connections with banks and financial institutions. These factors have caused housing disparity in urban areas.

Commenting on how public housing programmes could reach the lowest income groups, Johnstone (1984) urged significant cost reduction measures and easier repayment terms. Touching on public housing construction, several factors were conducive to cost reductions such as land preparation and cost, infrastructure and buildings standards, labour and material cost, and the implementation capacity of state authorities. He argued that the existent of squatters in urban areas was an approach by the poor to solve their housing problems. This is also a manifestation of their inability and unwillingness to pay high costs and of the restrictions of the conventional housing market (Johnstone, 1984; p.524).

Clarity of housing policy is one of the requirements argued by many writers for a successful housing programme. In Malaysia, a comprehensive national housing is still in preparation. The aim is to gain a clear and committed housing policy laid down by the federal and state governments. Several writers advocated urgency in preparing and adopting a comprehensive housing policy that emphasises housing for lower-income

people (Alithambi, 1980; Endan, 1984; Agus, 1986). Formulation of a comprehensive national housing policy is aimed at overcoming weaknesses in the housing sector. Agus (1980) claimed that the existence of many discrepancies in the housing sector was due to a lack of comprehensive guidelines for the public and private sectors which resulted in a poor and unsatisfactory administration of housing policy. This has also caused several misinterpretations of the federal government's housing guidelines by states and local authorities. Agus was of the opinion that the implementation problems occurred as a result not only of social and economic factors but also of political factors. He asserted the urgency of the formulation of a comprehensive national housing policy as an approach encouraging the low-cost housing implementation by the public and private sectors and reaching the right target group (Agus, 1986). The creation of a leading agency at the federal level, known as the National Housing Authority, was urged by several authors as the proper machinery to implement a public housing policy and programme (Alithambi, 1979, 1980; Tan, 1982; Agus, 1986, 1992; Goh, 1991).

Agus (1989) criticised the capability of public agencies in implementing large scale housing projects. These weaknesses include administrative incapacity and inefficiency in managing the low-cost projects, and the constant intervention of political parties at the local level. He viewed the under-achievement of the public housing programme in terms of its failure to achieve pre-determined targets. Reasons for such problems are:-

- a) Problems related to land use policies, building codes and planning policies;* delays in obtaining clearance from land offices and local authorities are the common factors blamed for a project's delay. These delays are a consequence of lengthy legal and administrative procedures, conforming to numerous legislations and the fact that authorities are overburdened with other responsibilities.
- b) production and construction policies;* of public corporations which have to operate in the more profitable areas of medium and high cost. Low-cost housing construction was neglected and viewed as an unprofitable venture.
- c) management and distribution policies;* imposed by the state governments for the distribution of houses but lacking in co-ordination and subject to difference interpretation, which affect the ability of lower-income groups to own houses.

d) *financial policies*; the bulk of credit facilities went to middle and high income groups.

Agus concluded that public housing corporations in Malaysia favoured the middle and high-income groups. He recommended that, in order to improve the public housing achievement, cheap land would be needed to make possible the construction of cheap houses, the improvement of the capability and efficiency of approving authorities would be required and it would be necessary to increase allocation and better access to credit facilities.

PUBLIC LOW-COST HOUSING PROGRAMME

"Public Low-cost Housing Programme" (PLCHP) is a main public housing programme amongst several other public housing programmes formulated by the government to accomplish the objective of providing affordable housing to lower-income groups. This programme is also expected to fulfil the multi-faceted objectives of raising occupants to a better living environment, enhancing national unity, providing the opportunity to own property, fulfilling housing needs and gaining political support. Resettlements of occupants into the public housing schemes provide them with better housing and facilities than where they previously lived (Wagelin, 1978) whether in the slum areas or in the rural areas that lacked of potable water, electricity and other facilities. The provision of public housing also provides opportunity for owning a house in line with the policy of "house owning democracy" (MHLG, 1981; Agus, 1992; p.1). In relation to the national unity, the scheme also provides integrity amongst various racial groups because the housing allocation was based on the racial composition. The allocation of public houses to a certain extent also involved political justification based on "*patron-client*" relationships of occupants in the local political arena (Agus, 1992; p.21; Agus, 1986)

PLCHP is a housing programme implemented through an intergovernmental co-operation and division of responsibility between the federal and states government. Federal government acts as a co-ordinator and financier; provides funds in form of loan to states government. Whereas states government act as developers, whose borrow money from federal and implement the projects. Acting as housing developers for the programme, state governments are responsible for planning, implementing and administering the programme.

To implement the projects, the states government are assisted by implementing agencies that provide technical services. Federal government provides technical assistance to the states government through the service of National Housing Department. Houses built under this programme are either for sale or for rent for a number of years with the option to buy. The Ministry of Housing and Local Government (MHLG) is responsible for co-ordinating and supervising the programme for the state governments.

Many of studies conducted on this public housing were directed towards arguments concerning technical questions about housing designs and lay-out (Tan 1979; Leong, 1979; Gunasilan, 1983; Tan, 1976); cost benefits analysis (Wagelin, 1978); and post implementation issues such as housing allocation and satisfaction from the occupants' point of view (Sidi, 1991; Yahya, 1993; Mohamad, 1984; Ministry of Housing and Local Government, 1981, 1982, & 1993), housing distribution (Agus, 1986) and rehousing programme (Wagelin, 1970). However, only few people addressed the core issue of the difficulty of implementing housing policy for the lower-income groups, including Johnstone (1977, 1979, 1983, 1984), Alithambi (1980) and Endan (1984). Alithambi (1980) investigated the problem of a gap between policy intention and programme implementation. He argued that the ability of the public sector in responding to the housing demand was obstructed by the existence of vague public housing policies, an unrealistic production programme, an ineffective organisational leadership and the diffusion of the housing efforts by several public institutions. Endan (1984) posited that, while the public housing programme made substantial progress, the housing problem is tackled in an ad hoc manner, uncoordinated and uncomprehensive. A myriad of public housing policies which bear no relationship to one another and cause confusion in the housing delivery systems has resulted. He also suggested that the government must be prepared for a larger and more effective role in housing to meet the rising expectation of the people and to achieve the formulated policy statement on housing for the lower-income people. The government was also urged to place housing higher on the public policy agenda.

The Malaysian constitution had set out the division of power between the federal and state government; in which housing and land are the state's matter. Because housing was an important for the welfare of the people, the programme had become a shared responsibility between the federal and state governments. Yet, this approach has merits and demerits; although the state governments have power over housing matters, the independence of the state is vulnerable to the control of funding, the imposition of

conditions by the federal government, and to political patronage. However, the creation of several committees between the two levels of government provided channel' for negotiation, bargaining and compromising of whatever problems and differences arise from the implementation of such public housing policy (Alithambi, 1979).

According to Alithambi (1980) public housing effort in Peninsular Malaysia was still inadequate to meet the demand of newly formed families and low-income urban migrants. He perceived the main reasons for the limited performance of public housing programme to be the result of inadequate housing policy, the inexistence for a dynamic housing institution to plan for and implement housing programme and the diffusion of housing effort over several public institutions. His study showed that housing policy and development were disjointed, fragmented and incoherent. There existed wide gaps between policies as expressed in five years development plans and the implementation. The programme received inadequate funding. The system of projects identification for the programme was too politicised, ignoring the declared salient aspect of housing policy. His study concluded that a new framework of federal-state participation at policy making and project implementation level was required.

Appraisal to this programme was made by Wagelin (1987) by carrying out an in-depth study of six public low-cost housing schemes in Kuala Lumpur. He used the approach of cost benefit evaluation on the squatter re-housing programme which took into account the different impacts of the scheme on ethnic, income differentiated and population group. Particular attention was also paid to some social impacts of improved housing such as those related to health productivity, crime and inter-ethnic attitude. The study showed that one of the impacts of this public housing programme was transforming the homogeneous society to a multi-racial one. The cost-benefit appraisal showed that only two out of six schemes studied were financially profitable to the government. This study addressed both the cost to the producer and the effect on the client.

Eligibility and Affordability

The price of houses in Malaysia is rapidly increasing beyond the capability of the large majority of the lower income groups. However, this PLCHP is providing a more convenient and affordable financial arrangement than other types of low cost houses purchasing because it utilised government funds. During 1970's the low-income groups eligible for this programme were defined as those with monthly household income

of less than M\$500.00 in Peninsular Malaysia and less than M\$700.00 in East Malaysia (Malaysia, 1981; p.361). Then, through out the 1980s and 1990s it has been redefined as for the people with household incomes between M\$400.00 and M\$750.00 per month. The financial arrangement to purchase a house under this programme is more convenient because a purchaser has to pay only a M\$143.35 monthly instalments for 30 years and the up-front money equivalent to two or three months' instalments. These people usually are not qualified to purchase *private low cost housing* because the available commercial financing is for people with a minimum household income of M\$825.00 per month, with required instalment of M\$275.00 per month and up-front money of about 10% of the house price. Application for financing also requires far more stringent credentials. The selling price of PLCHP is normally lower than M\$25,000 because the aim is not to make a profit.⁽³⁾

IMPLEMENTATION PROCESS

The overall implementation process for the housing production under this programme involved participation of federal and state agencies, in conformity with all relevant government administrative procedures, subject to planning procedures and requirements of local authorities. The process involving initial project planning, acquisition of sites, gaining planning permission, obtaining several clearance points from various agencies, conforming to legal and administrative requirements and supervision of project construction by contractors. As a whole, the process has to undergo four stages:-

- (1) *The programme preparation and planning stage;* involves the process of getting the project approval under the 'five year plan', the planning and preparation for the project implementation.
- (2) *The project resourcing stage;* involves the budgetary process for annual allocation of funds, project funding, and procedures for loan approval and withdrawals.
- (3) *The construction stage;* includes project construction activities from the beginning until the completion.
- (4) *The completion stage;* relates to the process after the completion of project construction and occupation by successful house buyers.

Preparation and Planning Stage

In general, a number of writers is in consensus that delays in obtaining clearance for housing development approval was one of the difficulties in Malaysia's housing implementation process. This difficulty is associated with lengthy approval process (Sen, 1988; p.29, World Bank, 1989), administrative delays and bureaucratic red-tapes (Hong, 1991; p.8; Rachagan, 1992; p.26) where the process went through many steps and a number of government agencies (Johnstone, 1983; p.256, MHLG, 1986, 1991; HDAM, 1990). The processes for land conversion and obtaining planning approval were time consuming and ranging between three and five years (Teo, 1991; p.27) because there was no time limit imposed for this processing of approval (Yin, 1993).

Although PLCHP is a public programme, it also faced similar difficulties as other housing development during the planning and formulation stage. Endan (1984) stated that PLCHP had to undergo two stages (a) the formulation stage, and; (b) implementation stage. Problems occurred during the formulation stage because the list of proposed projects for five-year plan was inadequately prepared. This was associated with two factors: the lacked of housing master plan and the project formulation was carried out in a tight schedule. To overcome the lacked of master plan, as an alternative, the states had to sought assistance from district offices. Districts offices which were handicapped with qualified staff in housing matters had to come up with a list of projects proposal. Project proposals were also made in a hurry, where some were made without verification on the ground. This had resulted that there were some projects occupied by illegal squatters or inaccessible to utility supplies. During the implementation stage, projects were plagued with many problems such as time consuming to move from preliminary stage to final stage, facing with departmental red tapes, delaying in land acquisition and conflicting requirement imposed by several departments (Endan, 1984; p.67 to 70).

This programme also faced a host of other problems at this stage such as administrative delays and lengthy process (Agus, 1992; p.15), incapability of agencies at local level to implement public housing projects (MHLG, 1991(a); p.21; Agus, 1992; p.24), indecisiveness of the project sites and undetermined about their priority (MHLG, 1991(b); p.2), land problems (Agus, 1992; p.15) and problems relating to obtaining planning approvals (Agus, 1992; p.18-19). When analysing factors influencing the location, layout and scale of these projects Tan (1979) found out that the 'haphazard

location' was due to the absence of overall clear policy worked out by central government. The decision on location was based on the availability of land and political expediency. Another writer pointed out that the common reason for project delays associated with site selection. This occurred because delays in site identification, changed of sites after they had been identified and selected for implementation, and; poor or wrong choice of sites (Ooi, 1983; p.40). He emphasised that a careful site selection was to be made before each five-year plan period began. If this process takes place only at the beginning of plan's period, it could resulted in delays of project implementation. Moreover, he described that unsuitable sites would caused higher construction cost.

To overcome problems at this formulation and planning stage it was proposed a housing master plan be prepared, so that the state could identified suitable land in advance and the state could create its land bank for this programme (Endan, 1984; p.69). It was also suggested that the programme's planning should be carried out from the very beginning with full information about sites, matching financial resources required and available, the viability of project, and suitability in relation to socio-cultural factors. To achieve successful programme implementation, there was a need for a degree of co-operation and agreement between the federal and state administrators, to ensure that funds are available from federal and site and services available from the state (Tan, 1979). To expedite the implementation process, states government were required to expedite the land conversion and subdivision process, while local authorities were asked to expedite the approval process for lay-out plans and building plans (MHLG, 1991 (a); p.16; Muhammad and Loo, 1983; p.18).

During this planning stage state governments must also appoint a technical agency to become implementer for this programme. The state has a choice of to use service of the National Housing Department, State Economic Development Corporation, Public Works Department, Housing Commission, Local Authorities or any other agencies. These implementing agencies play important role to realise the projects. Some states employ a single agency to implement housing projects while some states engage several agencies (Muhammad and Loo, 1983; p.23).

Description of problems as highlighted above thus suggests the needs for an examination of process involved at this stage.

Resourcing Stage

To enable states government borrow money to finance projects under this programme, annual allocation of funds are made to the Ministry of Housing and Local Government (MHLG) for this programme. The ministry decides the projects' estimates and their distribution amongst the states. The budgetary process requires scrutiny and assessment by the budget examination committee consisting of representatives from several federal agencies. The amount of this annual budget depends on the portion of the sum allocated for five year plans, the capability and priority of the programme, the financial policy decided by the Treasury and also taking into consideration the overall economic scenario of the country (MHLG, 1991). Table 4.2 below provides information related to funds allocation for public-low cost housing programme under the Ministry of Housing and Local Government from 1976 to 1990.

Table 4.2:

FUNDS ALLOCATION FOR PUBLIC LOW-COST HOUSING PROGRAMME PROVIDED TO MINISTRY OF HOUSING AND LOCAL GOVERNMENT BY REGION, 1976 TO 1990.

Year	Peninsular (MS)	Sarawak (MS)	Sabah (MS)	Total (MS)
1976-1980	262,947,439	36,369,502	17,473,000	316,789,941
1981-1985	1,366,897,030	74,280,030	60,760,030	1,501,937,030
1986-1990	308,488,600	30,684,900	42,065,010	381,238,510

Source.

Malaysia (1980-1990)

States government are the borrowers and they have to apply funding for priority projects which they have determined. When applications are received by the MHLG, they are assessed by the "Technical Committee of Housing Loan" (TCOHL) whose chaired by the ministry's secretary general. Other members consist of several officers in the MHLG and representatives from EPU, ICU and the Treasury. The committee then makes recommendations to the Treasury (Ooi, 1983; p.38, MHLG, 1990; p.6). Project briefs are scrutinised, reviewed and assessed in detail based on criteria such as cost estimate, financial viability, technical feasibility, designs, location, marketability, etc. Applications

for loan are forwarded to the Treasury for further consideration. Loan approval conforms to certain internal procedures and, when approved, it is followed by the signing of loan agreements between both parties of the federal and state government. Loan disbursement to states is made based on the progress of each project. The Treasury will make a final decision on the application for loan withdrawal. Loan approval and withdrawal also depends on the status of states' arrears and current annuity to the federal government (MHLG, 1991a; p.16) The process could be further delayed if negotiations take place between federal and state governments to resolve the matter. It sometimes involves fundamental financial policies and procedures that require the decision of the National Finance Council.

Two problems were identified in relation to this resourcing stage. First, the process to arrive at loan agreement and later for loan withdrawals were lengthy and complicated (MHLG, 1991b; p.8). Second, as the result of this lengthy and complicated financial process simultaneously the effect of slow project progress, this programme was unable to spent the annual funds at satisfactory level (MHLG, 1991; p.15)

Construction Stage

The construction of the project is carried out by building contractors and the selection is made according to government procedures. If there is no major problem arise the project is normally completed within 18 months from the date of a tender is awarded. Endan (1984; p.71) identified three problems would occur at this stage: (a) when contractors unable to complete work within a specified schedule and required extension; (b) when contractors abandoned these projects and new contractors had to be appointed, and; (c) delays in making payment by government would slowed contractors' work.

The Completion /Occupancy Stage

After projects have been completed, certificates of fitness for occupation (CFO) must be obtained from the local authority before houses can be legally occupied. The issuing CFO is another critical area which caused delay to the whole delivery system of this programme (MHLG, 1993; p.7-21). Utility agencies may impose certain additional payment of contribution which was not accounted during the programme budgeting (MHLG, 1991b; p.9). Then the subsequent stage is handing over projects to states

government who are responsible to manage these projects in terms participants selection, rental collections and making loan payment to the federal government.

Two major problems occurred at this stage identified by Endan (1984; p.71) political intervention during the housing allocation to buyers and delays in processing the application. As the results there are cases of completed public housing projects were not occupied for months or even over a year because buyers were not selected. MHLG stated that these problems occurred because states government were not complying with the guidelines provided but inclined towards their own discretion (MHLG, 1991b; p.10)

Any project which is unable to be completed within the particular five years period it has to be carried forward to the next five-year plan and if the funding is insufficient the states have to make applications for additional financing.

Summary

There are four main stages involved in implementation of PLCHP from projects formulation to completion. The process of programme formulation takes place before the beginning of five-year plan. The process involved preparation of projects list by each state to the federal government. When these projects approved by federal government, the states have to carried out project planning and obtain financing from federal government. The subsequent stage is construction of projects and finally the completion stage. Several problems occurred during the planning stage because projects were inadequately prepared. This implied that poor planning at this stage may contribute to poor achievement at the end of the plan. The process involved to reach the completion stage is lengthy and to an extent each stage is affected by a number of problems.

CONCLUSION

The preceding discussions have described a brief overview of housing problems in the Third World and developing countries and highlighted the policies adopted by these countries either the public housing approach or the non-conventional approach. This chapter also discussed key issues of housing policies in Malaysia involving both private and public sectors emphasising on provision of houses for lower income groups. Finally, this chapter focused on the implementation Public Low-Cost Housing Programme by

describing the process involved, the problems faced and criticisms made to this programme. Based on these discussions important findings are summarised and re-emphasised as the following paragraphs.

First, Malaysia prefers public housing and other conventional approaches in realising its policy statement of providing affordable houses to lower income-groups. To achieve this intention the government constructed public housing, carried-out joint venture projects with private sector and required private housing developers to build low-cost houses as part of the conditions for housing developments.

Second, the government recognised the significant role played by private housing developers. The government adopted free enterprise and support the private sector in the housing industry through close co-operation with housing developers association. Malaysian government considered private sector as engine of growth for development and incorporated the policy that progress achieved by private sector benefits the nation. Since private developers inclined towards medium and high cost houses construction because of more lucrative profit than low-cost houses, justified intervention by government of imposing conditions for housing development approvals. This was also a part of attempt to achieve the objective of New Economic Policy of eradicating poverty and restructuring the society by providing opportunity for property ownership.

Third, government intervention in the housing industry was carried out by imposing broader national policy such as the New Economic Policy, imposition of additional requirements for development approvals and regulating through the housing finance. This brought both positive and negative impacts. Housing finance policies such as provision of loans for civil servants helped to stimulate the market and withdrawals of savings from EPF eased burden of house purchasing. Government policies in housing had significant impact on the housing sector development throughout 1970s to 1990s. These policies also brought about negative impacts when over-regulated and excessive requirements more than necessary were imposed where these were associated for causes responsible for price increases and burdened on housing developers.

Fourth, implementation of housing policies are dependent upon various level of governments involving the states and local authorities and range of other agencies. State governments play important roles in realising federal policies on housing because housing policies are related to land approvals. Thus, the key issue is co-ordination of federal policy

implementation by state governments and local authorities. The review on housing for the low-income people confirmed that the complexity of housing problem for low-income people despite the obligation to provide affordable housing, this policy was not adequate addressing the problem of answering housing needs. Added with the complexity of government structure and many agencies involved, improvements on co-ordination and co-operation amongst them are required.

Fifth, there is a major development of policy on low-cost housing, from purely the government responsibility as in early 1970s to a share responsibility with private sector. Then, in 1986 Special Low-Cost Housing Programme was launched as an approach to stimulate economic growth during recession. In 1994 and 1995 there were efforts of re-emphasising provision of housing for low-income people in the urban areas where a large amount allocation was provided.

Finally, the Public Low-cost Housing Programme (PLCHP) is still a major public housing policy because of its continuity and long established programme involving arrangement with state governments. Four stages of the implementation process of this PLCHP were identified. This programme was criticised for involving lengthy process and many stages. Many problems occurred along the implementation process, especially at planning stage.

To sum up, this author is in opinion that it is important to consider the 'policy implementation' perspective in the attempt understanding of the programmes success and improvement to public housing policy. Thus, more houses can be produced for those needy low-income people for which affordable housing is necessary.

In the following chapter this author analyses the performance of PLCHP in several five-year plans, with main emphasis on three five-year plans between 1976 and 1990. The chapter also highlight a brief overview of other housing programmes by the public sector.

Endnotes

1. The number of houses completed by public sector and private developers between 1981 and 1990 appeared as in the following table.

Number of Houses Completed by Private Developers and Public Sector According to Sales Price Between 1981 and 1990

Year	1981-85	1986-90	Total	1981-85	1986-90	Total	Grand Total
Price Category	Public	Public	Public	Private	Private	Private	
Low-Cost	80,798	74,865	155,663 (68%)	10,315	90,064	100,379 (32%)	256,042 (47%)
Medium-Cost	46,067	18,598	64,665 (28%)	20,334	163,489	183,823 (58%)	248,488 (46%)
High-Cost	5,681	1,441	7,122 (4%)	11,729	18,310	30,039 (11%)	37,161 (7%)
Grand Total	132,546	94,904	227,450 (100%)	42,378	271,863	314,241 (100%)	541,691 (100%)

Source:

MHLG (1992), Bulletin Perumahan 1990; p.9

The amount of housing credit provided by the public and private sector can be seen in the table below. In general the amount of credit provided to the housing sector is showing an increasing amount from 1980 to 1990. Treasury Housing Loan shows a significant amount with more than 30% to the total amount of credit provided.

Amount of Housing Credit for Mortgages Provided by Public and Private Sector to the Housing Sector between 1980 and 1990

Year	Commercial Banks	Finance Companies	Treasury:: Government Loan	Building Societies	Sabah Credit Corporation and Bank Rakyat	Total Credit Provided
1980	\$2,233	\$620	\$1,103	\$986		\$4,941
1981	\$2,811	\$833	\$2,094	\$1,214	\$49	\$7,001
1982	\$3498	\$1,085	\$3,359	\$1,450	\$77	\$9,468.2
1983	\$4,157.5	\$1,282.6	\$4,230.4	\$1,226.2	\$139.9	\$11,406.9
1984	\$5,129.5	\$1,542.8	\$5,045.7	\$1,740.3	\$176.8	\$13,635.3

1985	\$6,306.0	\$1,829.0	\$6,114.0	\$1,906.0	\$218.0	\$16,373.0
1986	\$7,039.0	\$2,076.0	\$6,801.0	\$1,944.0	\$226.0	\$18,086.0
1987	\$7,563.0	\$2,265.0	\$8,396.0	\$1,869.0	\$269.0	\$20,362.0
1988	\$7,712.0	\$2,333.0	\$8,968.0	\$1,751.0	\$291.0	\$21,055.0
1989	\$8,143.0	\$2,671.0	\$9,669.0	\$1,635	\$318.0	\$22,436.0
1990	\$9,587.0	\$3,365.0	\$10,601.0	\$1,610	\$340.0	\$25,503.0

Sources:

Bank Negara Report 1981-1990

The number of loans provided for housing mortgages to purchasers between 1986 and 1989 appear in the following table.

Number of Housing Loans Provided by Housing Finance Institutions

Year	Commercial Banks	Finance Companies	Treasury: Government Loan	Building Societies, etc.	Total Loan Provided
1986	29,334	10,627	25,653	1,564	67,178
1987	38,889	15,295	28,203	1,798	84,185
1988	39,015	22,123	31,900	6,051	99,089
1989	57,856	30,451	29,454	4,168	121,929

Sources:

Bank Negara Report 1987-1990

³. The sale of public housing is considered safer from buyers' point of view because they are buying houses which have already completed. On the contrary the purchase of low houses from private developers is based on progress payments of houses to be constructed. Private sector's projects failure known as "abandoned project" is one of serious housing issue and challenge to the Malaysian housing development. The purchase of private sector's housing requires a buyer to enter into an agreement with housing developer in advance of housing construction. The buyer has also to obtain housing loan from any financial institution. Developers abandoned their housing projects due to several reasons such as financial difficulty, poor management and internal problems, litigation and land problems, failure to obtain approval for amendments from authorities and many others. The details on abandoned housing projects in Peninsular Malaysia at 31.12.1991 involved 173 projects of 40,363 houses with 26,129 buyers of estimated value of M\$1,918.4 million. Out this 173 abandoned projects, 88 projects (51%) cannot be rehabilitated. (Source; MHLG, 1992)

CHAPTER FIVE:

PERFORMANCE OF PUBLIC LOW COST HOUSING PROGRAMME IN MALAYSIA

Introduction

Until 1995, the government of Malaysia has been implementing six "five-year development plans" where housing policies, strategies and programmes are incorporated into the plan. Several housing programmes have been formulated and translated into the plans. This chapter assesses the performance of the Public Low-Cost Housing Programme in several five-year development plans with the main emphasis on the three 'five year plans' implemented between 1976 and 1990. This chapter also discusses problems associated with the achievement of this programme.

The Public Low Cost Housing Programme (PLCHP) is a public housing programme carried out by state governments with loans and technical assistance from the federal government. This programme caters for broad categories of low income groups in urban and rural areas. Besides PLCHP, the government also formulated several public housing programmes include (1) low cost housing construction by state economic development corporations, (2) housing by the land and regional development authorities, (3) institutional quarters for low income government workers, and (4) a special loan scheme for lower income groups to build houses on their own. Meanwhile three programmes involve the private sector: (a) the normal low cost housing; (b) cross-subsidies imposed on mixed housing development, and; (c) the 'special low cost housing programme' launched in 1986.

PUBLIC HOUSING PROGRAMMES PERFORMANCE

In Malaysia, housing supply involves two sources: the public and private sector. The public housing programmes encompass supply of houses by the government and other public agencies. The public housing programmes under the five

year plan are categorised into several programmes and implemented by a number of public agencies. In addition, the government also provides financial allocations for commercial housing to public corporations, such as the state economic development corporations and the Urban Development Authority (UDA).

Under the five year development strategy, these public housing programmes are categorised as one component of the 'social services sector'. This sector includes education, training, health, housing, social development and environment (Malaysia, 1986; p.271). During the 6MP (1991-1995) for example the 'social services sector' shared the second largest national allocation (25%) after the economic sector (57%), but above the security sector (15%) (Malaysia, 1991; p.62). Despite that, the share of public allocation and expenditure on housing out of the total national development, the allocation is still considered to be very little (Agus, 1992; p.97; MHLG, 1987). In 'five year plans' between 1971 and 1995, public funds allocated to housing programmes have never reached 10 per cent of the total national development allocation. The amount of funds allocated by the government for the housing sector ranges from merely 3% during the 2MP to 9% during the 5MP and 6MP.

Table 5.1 below compares the allocation for the 'public low cost housing programme' with the total allocation for 'all public housing programmes'. The total allocation for all public housing programmes includes funds provided for housing in land schemes and new frontiers, institutional quarters and other staff accommodation, the state economic development corporations' housing and also funds for the 'public low-cost housing programme'. The allocation for the public low cost housing shows an increasing share from merely 19% during 2MP to 77% during the 6MP. However, in 6MP this amount became smaller. This increased share reflects the concern of the government to provide housing for the low-income people that has been proclaimed as its policy objective, although the actual amount of allocation has fallen. During the 4MP, the public low cost housing programme received the largest amount of allocation of M\$1,712.22 million.⁽¹⁾ During the five year plan revisions, funds were increased and also decreased from the original allocation set at the beginning of the plan. Funds were increased during the 2MP, 3MP and 4MP but decreased in 5MP (due to economic recession and some of the projects were transferred to the 'special low cost housing programme' which was launched in 1986).

Table 5.1:

ALLOCATION FOR ALL PUBLIC HOUSING PROGRAMMES AND THE
PUBLIC LOW COST HOUSING PROGRAMME IN MALAYSIA, 1971-1995

Five Year Plan	PLCHP Original Allocation (million)	PLCHP Revised Allocation (million)	Public Housing Programmes Allocation (million)	Percentage PLCHP to Total Public Housing Allocation
2MP (1971-1975)	M\$102	M\$234.8	M\$1,218.33	19%
3MP (1976-1980)	M\$480	M\$640.09	M\$3,195.19	20%
4MP (1981-1985)	M\$1,000	M\$1,712.22	M\$3,399.12	50%
5MP (1986-1990)	M\$691.79	M\$477.30	M\$986.53	48%
6MP (1991-1995)	M\$735*	nil	\$952	77%

Note:

* This 6MP's total allocation for the Public Low Cost Housing Programme also includes allocation for sites and services of M\$165 million.

Sources:

1. Malaysia, 1973; p.213.
2. Malaysia, 1976; p.333.
3. Malaysia, 1979; p. 216.
4. Malaysia, 1981; p. 368.
5. Malaysia, 1986; p. 530.
6. Malaysia, 1991; p. 384.

The achievement of public sector housing programmes was always 'unsatisfactory' and shortfalls were experienced in every five year plan. The total number of houses constructed in each plan was lower than the total number targetted. When comparing the performance between other public housing programmes with 'the public low cost housing programme', as demonstrated in Table 5.2, the performance of "other public housing programmes" was better than the performance of the 'public low-cost housing programme'. The performance of other public housing programmes fluctuated from the high 130% in the 2MP to 65% in 3MP then 59% in 4MP and finally 69% in the 5MP. By contrast, the achievement of the "public low cost housing programme" was lower, where the achievement ranged from 30% during the 2MP to 57% during the 5MP. Other public housing programmes achieved better performance because these programmes were largely financed through federal grants, where shorter procedures involved than through the loan financing. Also in most cases their

construction was not subjected to the local authorities' approvals because some of these programmes were implemented in the land development schemes and new frontier development. Table 5.2 also shows that the highest number of houses constructed by the public sector was in the 4MP where 72,308 were constructed by the 'public low cost housing programme' and 130,600 through other public housing programmes.

Table 5.2:

TARGET AND COMPLETED: PUBLIC LOW COST HOUSING PROGRAMME AND OTHER PUBLIC HOUSING PROGRAMMES IN MALAYSIA, 1971-1995

Five Year Plan	PLCHP Target	PLCHP Completed (%)	Other Public Housing Programmes Target	Other Public Housing Programmes Completed	Total Number of Houses Completed
2MP (1971-1975)	48,120	13,244 (28%)	56,000	72,832 (130%)	86,076 (86%)
3MP (1976-1980)	73,500	26,250 (36%)	147,300	95,250 (65%)	121,500 (55%)
4MP (1981-1985)	176,500	72,308 (41%)	222,070	130,600 (59%)	201,900 (51%)
5MP (1986-1990)	45,800	26,172 (57%)	103,200	70,954 (69%)	97,126 (65%)
6MP (1991-1995)	40,000	10,345 (24%)	130,000	n.a.	n.a.

Notes:

n.a. = not available. Information related to achievement of 6MP is still not officially available during the writing of this thesis.

1. The number of target and completed houses based on information obtained from various Malaysia's 'five-year plan' document as mentioned below.
2. Although the large proportion of other public housing programmes built low-cost houses, these programmes also built a certain percentage of medium and high cost houses.
3. Out of this 103,200 houses targetted, 27,200 units for medium cost and 200 units for high cost houses.
4. The number of completed houses for the 6MP until May 1995. The actual figure on number of completed houses at the end of 6MP is still not available.

Sources:

1. Malaysia, 1976; p.332.
2. Malaysia, 1979; p.212 and 216.
3. Malaysia, 1984; p.360.
4. Malaysia, 1986; p.528
5. Malaysia, 1991; p.384
6. MHLG, 1995.

Low Cost Housing Construction Under Five-Year Plans

In line with the policy objective of providing affordable housing to lower income groups, the government planned to construct low cost housing in each of the five year plans. During the Third Malaysia Plan (1976-1980) about 120,600 low cost houses were originally planned. This includes 62,100 houses (51%) under the "public low cost housing programme" which was implemented through co-operation between the federal and state governments.⁽¹⁾ In addition, 33,500 units (28%) were to be implemented by the Federal Land Development Authority and also 25,000 houses (21%) were to be implemented by other land and regional development authorities (Malaysia, 1976; p.334-335). However, at the end of the plan in 1980, only 55% of these houses were completed.

The achievement of low-cost housing during the Fourth Malaysia Plan (1981-1985) was 'unsatisfactory'. Only 150,900 (37%) low-cost houses were completed out of the total 406,100 houses constructed by the public and private sector. Out of this total, the public sector completed 72,308 houses under the 'public low cost housing programme', 35,000 houses for settlers in the land schemes, 25,400 institutional quarters, whereas the private sector only completed 19,200 houses. The contribution of private housing developers to the target of low-cost housing during the plan was "very poor" because it represented only 21% out of the total 90,000 houses targetted. This implied that the private sector housing construction was inclined to medium and high priced housing which returned more lucrative profits. Even the public sector housing, under the state economic development corporations, built 70,016 medium and high priced houses, which exceeded their original target of 53,560 houses (Malaysia, 1986; p.522).

During the Fifth Malaysia Plan (1986-1990), a bigger target of low cost houses was set. A total of 495,000 low-cost houses was aimed at which consisted of 120,900 houses (24%) by the public sector⁽²⁾ and 374,100 houses by the private sector. This represented about 70.6% of the total 701,500 houses targetted for the plan. Similarly

¹ This PLCHP originally targetted to built 62,100 houses for the 3MP. When detailed proposal of projects finally approved by the federal government, 65,168 houses were targetted. Then during the revision of 3MP in 1978, this target was increased to 73,506 houses.

² This 120,900 unit consist of 45,800 by the PLCHP and another 75,100 houses from other public housing programmes. See also Table 5.2 where under "Other Public Housing Programmes" a total of 103,200 was set as a target of which 27,900 houses were for medium cost and 200 units high cost institutional quarters.

as with previous plans, the achievement of this low cost housing was still 'unsatisfactory', where only 164,396 houses (33%) were completed by the end of 1990. Out of the total 164,396 low-cost houses built, the public sector completed 74,332 houses (45%) and the private sector completed 90,064 houses (55%). Despite the 'unsatisfactory' performance of previous plans, the Sixth Malaysia Plan (1991-1995) targetted the building of 343,800 low-cost houses (60%) out of the total target of 573,000 houses. This was to be constructed by the public sector of 126,800 houses (37%) and by the private sector of 217,000 houses (Malaysia, 1991; p.365).

THE PUBLIC LOW COST HOUSING PROGRAMME

Construction of low-cost houses under the Public Low Cost Housing Programme (PLCHP) involves the co-operation between federal and state governments. Federal government provides loans to state governments to finance this programme. State governments responsible to construct houses and technical assistance provided by either the National Housing Department, the State Economic Development Corporations, the Public Works Department or any other agencies appointed by the state.

This programme began in 1951 where the first scheme completed in 1953, consisted of 120 houses at Air Panas, Setapak near Kuala Lumpur (Housing Trust, 1967; p.30). Until 1995, a total of 182,533 "public low-cost houses" had been constructed under the PLCHP which accommodated close to one million people.⁽³⁾ Table 5.3. shows the number of houses constructed under this programme from 1953 to 1995. The number of houses built in various five-year plans between 1956 and 1991 were varied, ranging from 2,983 to 72,308.

Table 5.4 shows the performance of this programme for 1956-1995, that includes the amount of allocation, expenditure, houses targetted, the number of houses completed and carried over to the next plan under several five year development plans. This table shows three important points: (a) the funds utilised were lower than the amount of allocation provided and their percentage varied between plan; (b) the number of houses completed were lower than the houses targetted; (c) a certain number of houses were carried over to the next plan, ranging from 13% to 61%.

³ Based on the estimate that average density was 5.6 person per house and discounting about 5% of the stocks were vacant or inhabitable (MHLG, 1993).

Table 5.3:

NUMBER OF PUBLIC LOW-COST HOUSES CONSTRUCTED 1953-1995

Planning Period	Year	Number of Houses Built
	1953-1955	311
First Malaya Plan	1956-1960	2,983
Second Malaya Plan	1961-1965	8,400
First Malaysia Plan	1966-1970	22,522
Second Malaysia Plan	1971-1975	13,244
Third Malaysia Plan	1976-1980	26,250
Fourth Malaysia Plan	1981-1985	72,308
Fifth Malaysia Plan	1986-1990	26,172
Sixth Malaysia Plan	1991-1995	10,343
Total		182,533

Note:

1. Official 'Five-year development plan' in Malaysia only began in 1956 known as the First Malaya Plan (1956-1960)
2. = not available

Sources:

1. Malaysia, 1967; p.27 to 33.
2. Malaysia, 1976; p.332.
3. Malaysia, 1979; p.212 and 216.
4. Malaysia, 1984; p.360.
5. Malaysia, 1991; p.384.
6. Ministry of Housing and Local Government, 1995.

Table 5.4:

PERFORMANCE OF PUBLIC LOW COST HOUSING PROGRAMME UNDER
"FIVE YEAR PLANS" 1956-1995

Plan Period	Funds Allocated (million)	Funds Utilised	Number of Houses Targetted	Number of Houses Completed	Number of Houses Carried Over to Next Plan*
1956-1960	M\$10.0	M\$9.3 (93%)	n.a.	2,983	n.a.
1961-1965	M\$45.0	M\$33.3 (74%)	n.a.	8,400	n.a.
1966-1970	M\$188.1	M\$99.8 (53%)	35,000	22,522 (64%)	n.a.
1971-1975	M\$234.0	M\$91.2 (39%)	48,120	13,244 (28%)	14,581 (30%)
1976-1980	M\$640.1	\$441.6 (69%)	73,500	26,250 (36%)	44,670 (61%)
1981-1985	M\$1712.2	M\$1,659.1 (97%)	176,500	72,308 (41%)	23,661 (13%)
1986-1990	M\$691.8	M\$345.0 (50%)	45,800	26,172 (57%)	19,628 (43%)
1990-1995**	M\$735.0	M\$151.6 (21%)	40,000	10,343 (26%)	n.a.

Notes:

n.a. = not available

* This column shows the number of houses that were not completed during the five-year plan and carried over their completion in the next plan.

** This represents the progressed achieved until June 1994.

Sources:

1. N.Jegatheesan, 1979: p.26
2. Malaysia, 1967; p.332
3. Malaysia, 1971; p.258
4. Malaysia, 1981; p.360
5. Malaysia, 1986; p.522, 528, 530
6. Malaysia, 1991; p.365, 384
7. Ministry of Housing and Local Government, 1995

Table 5.5 provides analysis on target and financial shortfalls of the programme between 1966 to 1990. The percentage of target shortfalls ranged between 36% to 72%. The percentage of financial shortfall amongst the plans varied between 3% to

61%. This table shows that target shortfalls were bigger than financial shortfalls, where a large percentage of allocation was not spent and a large percentage of houses intended were not built. This implied that it was difficult to use the funds allocated and difficult to achieve the pre-determined housing target.

Table 5.5:

TARGET AND FINANCIAL SHORTFALL BETWEEN 1966-1990

Plan	Year	Financial Shortfall	Target Shortfall
1MP	1966-70	47%	36%
2MP	1971-75	61%	72%
3MP	1976-80	31%	64%
4MP	1981-85	3%	59%
5MP	1986-90	50%	43%

THIRD MALAYSIA PLAN 1976-1980

During the Third Malaysia Plan (3MP) 1976-1980 the government emphasised its housing objective of lower income groups with adequate housing. In addition, housing ownership was declared as an important component for poverty eradication. It stressed that "...the efforts of public housing programmes will be to bring housing within the means of the poor" (Malaysia, 1971; p.330). Dissatisfied with the private housing developers' efforts towards building low-cost houses in the previous plan, the government took the stand that provision of houses for lower income groups would be made through public housing programmes. In the previous plan, only 1% of the total 65,000 houses built by private developers as low cost. Private developers concentrated on the construction of housing for the middle and higher income groups. However, during the plan revision in 1978, it was reported that there was a change to this policy. Several state governments had been imposing requirements on private developers to construct a certain number of low-cost houses as a condition to development approval. In the next plan this policy was imposed by all states on housing development applications.

The estimated housing need under the 3MP was 515,000 units. However, the total number of houses planned for the public and private sector was 482,800 units. Out of these, 220,800 houses (47%) would be built by the public sector and 262,000

houses (53%) would be built by private developers, co-operative societies, individuals and groups.⁽²⁾ For the public sector programmes, more than 59% were for the lower income groups. A total of M\$2,500 million were allocated for the public housing programmes at the beginning of the plan. Later, during the mid-term plan review, the allocation was increased to M\$3,195.19 million.

This plan also introduced several "promotional incentives" aimed at encouraging housing construction especially for the low-cost housing. These incentives were as follows:-

(1) Federal government revised lending terms to state governments for the financing of public low cost housing projects. From April 1977, the interest rate was increased from 2.5% to 4.0% per annum and payable within 20 years instead of 15 years. The state governments in turn were allowed to charge house buyers not more than 5.5% per annum. Then, in August 1978, a further revision made extending the loan periods to 25 years. As the result, the amount of monthly instalments for public low-cost housing became less of a burden and more affordable to lower-income groups. In 1978, during the plan revision, about \$380.6 million of loan had been approved to state governments to construct 42,300 houses out of 73,500 targetted (Malaysia, 1978; p.214).

(2) The Federal government also decided in January 1978 to set up revolving funds of \$5 million for each state government to assist in speeding up the construction of public low cost houses. These funds were to be utilised for the payment of land acquisition, site preparation and infrastructure development, while waiting for project loans approval by the Federal Treasury.

(3) In December 1976, the government initiated another housing finance scheme through the Malaysian Building Society Berhad for the purchase of low-cost houses below M\$20,000. An allocation of M\$400 million was made under this programme. House buyers were charged interest rate of 5.5% per annum, which was far below the market interest rate. Contributors to the Malaysian Employees Providence Funds (EPF) and those earning below M\$500.00 per month were eligible for this loan scheme. By the end of 1978, the Society had approved a loan commitment of M\$273.1 million to 20,199 low-cost house buyers in 83 projects in Peninsular Malaysia. Then by the end of 1981, a total loan of \$476.7 million was approved for the purchase of 31,331 houses in 166 housing projects (Bank Negara, 1982; p. 97).

(4) The government also initiated a revolving fund of M\$10 million for low-income people to construct houses on their own land in the rural areas. The maximum loan provided under this programme is M\$7,500 with 5.5% interest per annum.

(5) To meet the housing needs in the Federal Territory of Kuala Lumpur, an additional allocation of M\$53.24 million was made available by the Treasury to the City Hall. This made up a total of M\$156.34 million provided to finance on going public low-cost houses in Kuala Lumpur.

In addition to the above, during this plan the government also introduced measures to reduce the cost and price of houses aimed to be within the reach of the poor. Several policies were made, for example: curbing real estate speculation; issuing directives for vacillating conversion of land for residential use, expediting the approval process for building plans; modifications of building and infrastructure standards; increasing the supply of building materials; and, promoting research into cost reduction methods of construction.

To cater housing for the urban poor, several policy measures were made by the government as reported by the 3MP document that includes:-

(1) Joint-ventures with private sectors for the construction of low-cost house projects for the price range between M\$5,000 and M\$7000.

(2) 'Sites and services' projects in urban areas as an immediate measure for squatter families re-housing. A pilot project of 'site and services' supervised by the World Bank was implemented in Salak South near Kuala Lumpur. This project consisted of 316 plots catering for the low-income people involved in relocation as the result of a highway project.

(3) To implement squatters improvement schemes through the provision of basic services and facilities within their neighbourhood.

During this plan the government was aware of and recognised that "...implementation capacity appears to be the core of the problem" (Malaysia,1976;p.335). The revised 3MP reported that implementation problem "...in low-cost housing reflecting the problems associated with inadequate capacity, protracted process in obtaining suitable land and delay in providing complimentary

infrastructure." (Malaysia, 1978; p.211). The capability and efficiency of public agencies in translating policy objectives into policy outcomes were pointed out as a major hurdle to this plan. Co-ordination amongst various public agencies involved in housing was one of the areas that needed attention. There were more than 60 public agencies involved in public housing programmes (Tan, 1983; MHLG 1979b). The plan stressed that the government would strengthen its implementation capability and co-ordination among various agencies. The Federal government imposed the "top-down" implementation where it "...requires the States to assume positive roles in meeting the needs for low-cost housing in their own areas and to be accountable for shortfalls" (Malaysia, 1976; p.331).

As an effort to reduce house prices, there were attempts to persuade the federal government to bear the infrastructure cost for the low-cost housing projects. But this suggestion was finally turned down by the federal government.

Other efforts mentioned related to the improvement of the housing target in the plan were:

- (1) urging private housing developers to play more active role in housing,
- (2) stressing the importance of physical planning in housing development,
- (3) encouraging industrialists to build housing for their workers, and
- (4) ensuring adequate supply of building materials.

Performance of PLCHP in 3MP

During the 3MP, the original target for the PLCHP was 62,200 houses with funds of \$484 million allocated to the programme. However, when the list of projects from all the states finally approved by the federal government total funds of M\$517.2 million were allocated for 65,168 houses. About two years later, during the mid-term plan revision in 1978, a number of projects were added and the target was increased to 72,500 with the total allocation of M\$640.9 million. When the detailed list of projects examined by the federal agencies 72,622 houses with funds of M\$638 million were approved. The distribution of funds (original and revised), amount of expenditure and percentage of funds utilised in 3MP for this programme by states appear in Table 5.6.

Table 5.6:

ALLOCATION OF FUNDING AND EXPENDITURE FOR THE PUBLIC LOW COST HOUSING PROGRAMME IN THE THIRD MALAYSIA PLAN 1976-1980

States	Original Allocation (M\$)	Revised Allocation (M\$)	Amount of Expenditure (M\$)	Percentage of Allocation Utilised
Johor	94,273,530	94,273,530	58,511,117	62%
Kedah	52,242,000	52,242,000	38,121,000	73%
Kelantan	11,227,000	12,863,000	2,500,000	19%
Melaka	17,060,000	27,713,575	19,157,036	69%
Negeri Sembilan.	18,170,000	34,473,756	28,513,190	83%
Pahang	28,274,000	30,824,124	18,494,474	60%
Perak	24,543,000	26,863,875	25,357,697	94%
Perlis	13,570,000	16,266,500	3,650,000	22%
Pulau Pinang	34,442,000	39,674,400	19,500,000	49%
Sabah	12,630,000	22,109,000	18,823,220	85%
Sarawak	35,000,000	38,415,520	16,288,000	42%
Selangor	43,873,000	67,889,640	64,838,100	96%
Trengganu	13,760,000	17,933,940	12,600,000	70%
Wilayah	103,100,000	156,342,703	115,206,170	74%
Total	517,164,530	637,885,563	441,560,004	69%

Source:

Ministry of Housing and Local Government, Malaysia.

At the end of 3MP, the five year plan document reported that 26,250 houses (36%) were completed out the 73,500 units targetted.⁽³⁾ However, the actual progress achieved by 31.12.1980 was with 22,425 houses (31%) completed, another 22,203 houses (30%) under various stages of construction and 28,878 houses (39%) were still at various planning stages. The total number of uncompleted houses during this plan were 51,041 units which 44,690 had to be continued to the next five year plan and the other 6,411 were cancelled. The performance achieved by the state in terms the number of houses completed within the plan were ranging from 9% (Kelantan) to 58% (Sabah). Three states that had the highest number of houses completed were Selangor (4,264), Wilayah Persekutuan (3,718) and Johor (2,833). Three states that had the smallest number of houses completed were Kelantan (141), Perlis (210) and Sarawak

(559). Several states had a large number of uncompleted houses were carried over to the next plan such as Wilayah Persekutuan (10,476), Johor (7,374) and Selangor (4,363). (See Table 5.7 below).

Table 5.7:

**CONSTRUCTION PERFORMANCE OF PUBLIC LOW-COST HOUSING
PROGRAMME IN THE THIRD MALAYSIA PLAN 1976-1980**

States	TARGET				COMPLETE		CARRY OVER
	Number of Houses Carried Over From 2MP	Number of New Houses Targetted for the Plan	Number of Houses Targetted at Beginning of the Plan	Revised Targets After the Mid-term Review	Total Number of Houses Completed at the end of Plan	Percentage of Houses Completed at the end of the Plan	Number of Houses carried over to next plan
Johor	6,396	4,331	10,727	10,693	2,833	26%	7,374
Kedah	985	3,953	4,938	4,374	1,757	40%	2,587
Kelantan	556	1,257	1,813	1,497	141	9%	1,356
Melaka	556	2,854	3,410	3,514	763	22%	2,571
N.Sembilan	829	3,682	4,511	4,369	1,987	45%	2,382
Pahang	524	5,297	5,821	5,894	1,392	24%	2,728
Perak	1,089	2,328	3,417	3,310	1,520	46%	1,790
Perlis	228	1,372	1,600	1,875	210	11%	1,379
Penang	47	3,338	3,385	3,870	982	25%	2,483
Sabah	276	1,876	2,152	2,160	1,254	58%	790
Sarawak	1,239	2,113	3,352	4,730	559	13%	2,835
Selangor	200	9,302	9,502	10,635	4,264	40%	4,363
Trengganu	320	2,298	2,618	2,391	1,015	42%	1,376
Wilayah	13,36	6,586	7,922	14,194	3,718	26%	10,476
Total	14,581	50,587	65,168	73,506	22,425	31%	44,670

Notes:

There were 51,261 houses not completed by the end of 3MP period, of which 44,670 (87%) were carried forward to the next plan while 6,591 units (13%) were cancelled. Out of the total 44,670 units carried over to the next plan, 22,203 units (50%) were under various stages of construction while 22,467 units (50%) were at early planning stage.

Source:

Ministry of Housing and Local Government, Malaysia, 1994.

Three important points can be noted by comparing Table 5.6 and 5.7. First, there was an increase allocation of M\$120,721,033 or 23% for the increased target of 8,338 houses or 13% during the 3MP Revision in 1978. However, this allocation in 1976's price increased only 15% which was close the percentage of target increase. Second, these tables show that the percentage of allocation utilised (69%) was higher than the percentage of houses completed (31%) in the plan. Third, these tables confirmed that both target shortfall and financial shortfall occurred during the 3MP's period. This implied that as the result of a number of houses was not completed, therefore a certain amount of allocation was unable to spend.

FOURTH MALAYSIA PLAN 1981-1985

The housing objective under the Fourth Malaysia Plan (4MP) was "...to ensure that all Malaysians, in particular the low income group, will have access to adequate housing" (Malaysia, 1981; p.359). Committed to the policy statement of providing houses for lower income groups this plan attempted to achieve the largest housing target in the history of five year plans. This optimistic target was influenced by the housing industry boom from the late 1970s to the early 1980 and also because of the high demand for housing (Malaysia, 1980; p.17, 123 and 124; Khor, 1983; p.146).⁽⁴⁾

The number of houses aimed at in this plan were almost double the previous five year plan's target. The 4MP targetted 923,300 houses by both the public and private sector, where 365,300 were catering for population increases, 273,600 were to meet housing replacement and 284,400 were to cover housing backlogs. The estimated housing requirements for urban areas were about 337,000 houses or 36.5% of the total houses required for the plan.

Out of this total 923,300 houses, 398,570 (43%) were planned to be built by the public sector and 524,730 (57%) were to be built by the private sector. A total of 376,510 houses for low income groups was planned, of which 286,510 units (76%) were to be by public agencies and 90,000 units (26%) were expected to be constructed by private housing developers.

To achieve the intended plan outcomes for public housing, an allocation of funds amounted to M\$3,399.1 million was made. This amount was 8% higher than the amount allocated for the 3MP which was M\$3,195.2 million. However, this 4MP allocation in 1976's price was lower than 3MP because it was equivalent to M\$2,548.1 million only. The total funds allocated for the housing components during this 4MP

was M\$4,066.5 million and in 1976 constant price equal to M\$3,048.6 million (Malaysia, 1984; Appendix A).⁽⁵⁾

Several policy measures were taken by the government to improve housing construction during this plan, especially for low-cost houses. The policy measures were as follows:-

(1) All state governments were required to set up a State Liaison Committee and to be chaired by the "Menteri Besar" or Chief Minister of the state. This committee was responsible for low cost housing rental projects during the plan, deciding the numbers, type of houses to be built and approved their locations. This was also responsible for ensuring that all low cost housing projects in the state were smoothly implemented.

(2) The government determined that the selling price for low-cost houses was not to exceed M\$25,000. In addition, it was decided that low-cost houses in the urban areas were to be purchased by MBSB for the rental scheme. While the state governments would purchase low-cost houses constructed in non-urban areas by utilising the federal loans. Then the government would sell those houses directly to low-income groups.

(3) The government required that between 30% and 50% of private housing development projects must be low-cost housing. This condition was enforced as a requirement when state governments approved applications for land conversion and subdivision approvals. At later stage local authorities would ensure that private developers conformed to this requirement during building plan approval and the issue of buildings' certificates of fitness for occupation.

(4) The government increased the revolving funds from M\$5 to M\$20 million for each state. This would enable the state governments to make payment for the construction of public low-cost houses while waiting for the loan withdrawal from the federal government.

(5) The government, through Bank Negara Malaysia, had instructed all commercial banks and financial institutions to allocate at least 10% of their allocation for loans to the housing sector. Interest rates were also fixed at not more than 10% per annum, whereas previously it was between 12% and 14% per annum.

(6) In order to speed up the construction of public housing, the federal government allocated M\$2.2 million for the cost of land surveying. The land surveying tasks was undertaken by a consortium of license surveyors (PEJUTA). By October 1982, three quarters (368 out of 496 projects) of the newly proposed sites for public low-cost housing had been surveyed.

(7) Beginning in January 1982 the government also allowed contributors to the Employees Provident Fund (EPF) to withdraw their saving up to 45% (subject to a maximum of M\$20,000). This reduced the burden of house buying.

Some of the above policies were implemented, while others were not. The maximum selling price of M\$25,000 for low cost houses has continued in force. The positive aspect of this policy is that more low-cost houses were available than the previous plan and at a controlled price of not exceeding M\$25,000. The revolving funds of M\$20 million for each state government helped to overcome payment difficulties while waiting for project loan withdrawals from the central government. The policy of Malaysia Building Society Berhad (MBSB) and state governments purchasing low cost houses was not implemented due to the financial constraints of the government (Endan, 1984; p.126).

The 4MP experienced shortfall in the overall target, since only 406,1000 houses (44%) built instead of 923,300 targetted. This overall shortfall was 56%, but the shortfall for low-cost houses was even higher at 66%. The construction shortfall was largely due to the cutback in allocation and administrative delays such as problems in identifying suitable project sites and preparation of tender documents. The shortfall of housing in the land schemes programme was the result of the postponement of several land development projects (Malaysia, 1986; p.522).

Performance of PLCHP under 4MP

In 4MP, the original target for public low cost housing was 165,606 houses, which consisted of 120,936 units from new projects, while the balance of 44,670 units were carried over from projects in the previous five year plan. Then in early 1984, this target was increased to 176,502. Despite the poor achievement of only 31% during the previous plan, this plan was a very ambitious one: more than double the previous target: attempting to build almost seven times the amounts completed. Table 5.8 below shows the target and number of houses completed during the 4MP. By the end of the plan only 73,258 houses (42%) completed, 22,431 houses (13%) were under

construction and the balance of 80,813 houses (45%) were under various planning stages. Out of 102,704 uncompleted houses, 23,661 houses (23%) were carried over to the next plan while the other 79,043 houses (77%) were either cancelled or transferred to the special low cost housing programme.

The achievement of 42% in this plan was higher than the 31% achieved in 3MP. The actual number of houses completed also was also higher: 72,258 units compare with 22,425 in previous plan. The performance in terms of the number of houses completed amongst states in this plan was varied, with the lowest 13% (Sabah) and highest 89% (Perlis). Three states that had the highest percentage of houses completed were Perlis, Kedah and Melaka with 89%, 76% and 70% respectively. Sabah had the lowest number of houses completed where only 910 out of 4,983 planned. Wilayah Persekutuan had the highest number of the actual houses completed of 16,735 units.

Table 5.8:

CONSTRUCTION PERFORMANCE OF THE PUBLIC LOW COST HOUSING PROGRAMME BY STATE IN FOURTH MALAYSIA PLAN 1981-1985

States	TARGET				COMPLETED		CARRY OVER
	Number of Houses Carried Over From 3MP	Number of New Houses Targetted for the Plan	Number of Houses Targetted at Beginning of the Plan	Revised Target During Mid-term Review	Total Houses Completed	Percentage of Houses Completed in the Plan	Number of Houses Carry Over to the Next Plan (5MP)
Johor	7,374	15,793	23,167	22,896	11,977	52%	1,882
Kedah	2,587	8,448	11,035	7,681	5,835	76%	1,132
Kelantan	1,356	4,926	6,282	6,172	2,699	44%	254
Melaka	2,571	2,486	5,237	5,657	3,936	70%	941
N.Sembilan	2,382	7,180	9,562	8,824	4,932	56%	1,000
Pahang	2,728	10,938	13,666	12,572	3,320	26%	5,263
Penang	2,483	4,569	7,052	6,983	4,397	63%	304
Perak	1,790	10,162	11,952	16,897	3,076	18%	4,759
Perlis	1,379	1,373	2,752	2,390	2,120	89%	218
Sabah	790	4,436	5,226	6,983	910	13%	450
Sarawak	2,835	2,914	5,749	6,793	3,257	48%	137
Selangor	4,363	15,261	19,624	20,234	6,260	31%	4,771
Trengganu	1,376	4,485	5,861	6,103	3,804	48%	388
Wilayah	10,476	27,965	38,441	46,227	16,735	36%	2,162
TOTAL	44,670	120,936	165,606	176,502	73,258	42%	23,661

Source: Ministry of Housing and Local Government, Malaysia, 1994.

At the beginning of 4MP, funds of M\$1,026 million were provided for the targetted 165,606 houses. Coping with increases in cost and the extra number of houses to be constructed, the allocation for PLCHP was increased to \$2,695 million during the plan revision in 1983 (refer Table 5.9 below). This was an increase of more than one and half time of the funds allocated at the beginning of the plan. All the states received increased funding which amongst the largest were: Wilayah Persekutuan received an additional M\$201 million totalled up to M\$704.6 million; Johor received another M\$219 million which total up to M\$335 million; and Perak received additional funds of M\$203 million that total up to M\$288 million.

By the end of the plan M\$2,399.9 million or 89% of funds were utilised. The percentage of allocation utilised ranging from 26% to 170% which show large variations between states. Some of the states spent more than their allocated funds such as Pulau Pinang (170%), Selangor (120%) and Kelantan (109%). Johor had the biggest allocation of M\$334,872,709 and 11,977 houses completed.

Table 5.9: ALLOCATION OF FUNDING AND EXPENDITURE OF THE PUBLIC LOW COST HOUSING PROGRAMME IN THE FOURTH MALAYSIA PLAN 1981-1985

State	Original Allocation (M\$)	Revised Allocation (M\$)	Amount of Expenditure (M\$)	% of Allocation Spend
Johor	115,780,000	334,872,709	340,180,269	102%
Kedah	78,100,000	115,590,786	125,782,519	109%
Kelantan	40,100,000	97,769,143	69,192,823	71%
Melaka	76,200,000	76,339,710	69,304,264	91%
Neg. Sembilan	75,400,000	150,542,099	126,654,229	84%
P.Pinang	13,400,000	25,798,000	43,765,936	170%
Pahang	68,540,000	207,447,330	210,868,931	102%
Perak	85,400,000	288,081,535	206,485,091	72%
Perlis	37,300,000	85,978,000	21,930,734	26%
Sabah	34,100,000	89,396,000	92,443,047	103%
Sarawak	57,100,000	103,473,162	76,470,511	74%
Selangor	105,980,000	318,051,203	382,427,698	120%
Trengganu	37,600,000	96,611,266	84,451,803	87%
Wilayah	201,000,000	704,600,000	550,000,000	78%
Total	1,026,000,000	2,694,550,943	2,399,957,855	89%

Source:

Ministry of Housing and Local Government, Malaysia, 1994.

Comparing the Table 5.8 and 5.9 show that: (a) the increased of target by 10,896 houses or 7% with a large allocation increase of M\$1,668,550,943 or 162%; (b) this increased of funds was equivalent to 118% only in 1981's price; (c) the amount of allocation utilised (89%) was higher than number of houses completed (42%) in the plan; and , (d) these two tables confirmed that both target shortfall and financial shortfall occurred during the 4MP's period.

FIFTH MALAYSIA PLAN 1986-1990

During the Fifth Malaysia Plan (1986-1990) a total of 701,500 houses were planned. Out of this total 149,000 were to be built by the public sector and the other 552,500 were to be implemented by the private sector. Out of this total, 495,000 (71%) were targetted for low-cost houses, 180,200 (26%) targetted for medium-cost houses and only 26,300 (3.7%) targetted for high cost houses. The public sector planned to construct 149,000 houses, of which 120,900 were to be low-cost units, 27,900 were to be medium-cost units and only 200 were to be high-cost units. The private sector targetted to built 552,000 houses of which 374,100 low-cost houses, 152,300 medium-cost houses and 26,100 high-cost houses (Malaysia, 1986; p.528 &1989; p.282)

Housing policies and strategies developed for the 5MP reflected some past policy strategies, as well as incorporating new measures. They were as follows:-

(1) Emphasising and encouraging the construction of bigger numbers of low-cost and medium-cost houses in urban areas to meet the demand from majority of people.

(2) Encouraging more rental houses to meet the immediate need of people, especially low-income workers in urban areas.

(3) Emphasising human settlement concept in planning and developing housing projects. Under this concept, housing development is seen in the broader context of creating a "decent and viable human settlement" . For this purpose, the government proclaimed that it would ensure, adequate provision of basic infrastructure and social facilities on housing projects.

(4) Encouraging the greater participation of private developers in low cost housing. The government promised to provide as much assistance as possible to private developers.

By the end of 5MP, similarly as previous plans, the number of houses completed were lower than the targetted. Only a total of 300,928 houses (43%) were completed out of the 701,500 houses targetted. The public sector completed 65% while the private sector completed 37% of the target. The percentage of houses completed according to category was: 33% low-cost houses, 65% medium-cost and 75% high-cost. This implied that in practice housing construction was still inclined toward medium and high-cost housing.

During this plan the 'Special Low Cost Housing Programme' was launched in 1986. The main objective was promoting economic growth as a measure against recession and at the same time providing affordable houses to low-income groups. The construction target was 80,000 houses per annum, to be completed by 1989. The initial response from the private sector for this programme was very encouraging. Several incentives were provided under this scheme such as the exemption from stamp duty on sales and purchase agreement for house buyers, free land surveys, relaxation on some planning standards, and a reduction in the rate of the land conversion fee and payment premium to state governments. A total of 334,600 houses intended to be built by private developers were registered by the MHLG out of the original target of 240,000 units. This registered houses exceeded the target by 86,906, or 36%, of the original target. In supporting this programme, the Central Bank set lending guidelines for banks and finance companies. They were required, by 31st December, 1989, to make commitments to individuals to finance the purchase of at least 100,000 units of newly constructed houses, each costing \$100,000 or less of which at least 60,000 units should be less than \$25,000. By the end of 1989 the commercial banks and companies had financed 150,602 units of newly constructed houses of less than \$100,000 of which 63,889 units were the low-cost.

However, by the end of 1990, only 99,800 units or 30.5% of these 'special low-cost housing programme' were completed. The poor performance was due to several reasons, such as unsuitable project locations, management and financial problems, misuse of funds, incompetent contractors, and delays in plan approvals (Malaysia, 1991; pp. 407-408). In 1990 there were 277 projects abandoned which involved 63,560 units and 36,130 buyers. To overcome this problem and to salvage some of the projects, the government formed "Tabung Pemulihan Projek

Terbengkalai" (Rescue Funds for Abandoned Housing Projects) in 1990 under direct supervision of the Bank Negara, with the funds of M\$600 million.

Performance of PLCHP in 5MP

Construction under the 'public low cost housing' had a target of 45,800 houses, with total funds of \$294,253,000. Table 5.10 provides information on the number of houses targetted, completed and not completed in 5MP by the states. The PLCHP under the 5MP aimed for a moderate target, originally only 45,769 houses consisted of 23,661 carried over from previous plan and 22,108 newly formulated houses. This target was almost four times lesser than the previous plan. Three reasons justified for lesser targets: (1) lessons from the poor performance in past plans; (2) in line with government policy to reduce the public sector's role in providing low-cost houses and to encourage the private sector to provide more low-cost houses; and (3) the economic recession which had restricted the public funding.

During the plan revision only a very small increase of total target made, instead targets were re-distributed amongst of states. Nine states reduced their targets while three states (Pahang, Sabah and Sarawak) had a significant increase in the number of their targets.

By the end of 5MP, the number of houses completed was 26,172 units (57%), out of the total 45,800 targetted. The number of uncompleted houses were 19,628 units of which 19,392 were carried forward and continued to the 6MP. The percentage of houses completed amongst states ranging from 18% to 83%. Three states had highest percentage of houses completed were Wilayah Persekutuan (83%), Kedah (83%) and Perlis (83%). While, three states had the lowest percentage of completion were Sabah (18%), Trengganu (22%) and Kelantan (38%). The problems identified related to this shortfall of targets were lack of effective demand, due to largely unsuitable locations and unaffordable prices as well as non-performing contractors (Malaysia, 1991; p.364). However, the overall PLCHP's performance was still better than the private sector's achievement on the construction of houses under the SLCHP (Malaysia, 1989; p.283).

Table 5.10:

**CONSTRUCTION PERFORMANCE OF THE PUBLIC LOW COST HOUSING
PROGRAMME BY STATE IN FIFTH MALAYSIA PLAN 1986-1990**

States	Number of Houses Carried Over From 4MP	Number of New Houses Targetted for the Plan	Number of Houses Targetted at Beginning of the Plan	Revised Target During Mid-term Review	Number of Houses Completed in the Plan	Percentage of Houses Completed	Number of Houses Carry Over to the Next Plan (6MP)
Johor	1,882	5,977	7,859	7,114	4,560	64%	2,554
Kedah	1,332	863	1,995	1,233	1,021	83%	0
Kelantan	254	2,717	2,971	3,072	1,180	38%	1,486
Melaka	941	684	1,625	1,087	757	70%	143
N.Sembilan	1,000	3,552	4,552	3,979	2,185	55%	1,765
Pahang	5,263	1,059	6,322	8,813	5,772	66%	1,588
Penang	304	592	896	1,065	615	58%	450
Perak	4,759	1,614	6,373	5,775	3,839	67%	1,936
Perlis	218	770	988	441	365	83%	76
Sabah	450	30	480	2,895	1,734	60%	1,161
Sarawak	137	2,050	2,187	3,788	692	18%	2,276
Selangor	4,771	0	4,771	3,998	2,162	54%	1,836
Trengganu	388	1,754	2,142	1,333	290	22%	815
Wilayah	2162	445	2,608	1,207	1,000	83%	207
TOTAL	23,661	22,108	45,769	45,800	26,172	57%	16,293

Source:

Ministry of Housing and Local Government, Malaysia, 1994.

The following Table 5.11 provides information on funding and expenditure of PLCHP in 5MP. The table shows that all states spent less than funds provided, where overall only 76% were utilised. This financial shortfall occurred because of a large percentage (43%) of houses were not completed during the plan. A larger proportion of funds was utilised during early 5MP, where in 1986 funds of M\$45,515,069 were utilised. Then expenditure gradually decreased each year where M\$45,515,069 utilised in 1987, M\$36,693,854 in 1988, M\$32,554,630 in 1989 and finally M\$17,834,343 spent in 1990. Larger funds utilised during early 5MP because to make payments for construction of carried over projects from 4MP in this plan. Table 5.10 and 5.11 confirmed that shortfall of targets and expenditure also occurred in this plan.

Table 5.11 :

ALLOCATION OF FUNDING AND EXPENDITURE FOR THE PUBLIC LOW COST HOUSING PROGRAMME IN THE FIFTH MALAYSIA PLAN 1986-1990

States	Amount of Allocation (M\$)	Amount of Expenditure (M\$)	% of Allocation Spent
Johor	53,746,000	40,829,00	76%
Kedah	0	0	0
Kelantan	25,451,000	18,101,896	71%
Melaka	1,955,000	0	0%
Negeri Sembilan	19,640,000	17,694,386	90%
Pahang	20,730,000	11,517,488	56%
Perak	54,234,000	49,208,953	91%
Perlis	5,815,000	4,763,629	82%
Pulau Pinang	9,894,000	5,126,766	52%
Sabah	17,052,000	11,829,000	69%
Sarawak	34,900,000	21,714,017	62%
Selangor	38,691,000	2,358,966	94%
Trengganu	12,145,000	6,226,650	51%
Total	294,253,000	223,344,397	76%

Source:

Ministry of Housing and Local Government, Malaysia, 1994.

EFFORTS FOR PROBLEM SOLUTION

Researching through official documents exhibited that government were concerned with over two main housing problems; the shortfall of housing targets and the price increase. As the result several measures were introduced (directly and indirectly) to overcome the problem such as the adoption of Uniform Building Bye-Laws and Town and Country Planning Act, 1976, the establishment of National Housing Department in 1976 to assist states implementing this programme, the increase of pay back period from 20 to 25 year in 1978, increased allocation of funds in five year plans and the formulation of a revolving fund in 1978 (Malaysia, 1978; 214).

Revolving Fund

Project financing was identified as one of the problem areas in the programme implementation. To overcome this problem, in January 1978 the federal government approved a revolving fund of M\$5 million to each state with the interest rate at 4.0% per annum and payable within 23 years. The aim was to enable state governments to financing projects' preliminary works such as land acquisition, site preparations and infrastructure development. However in 3MP only nine out of thirteen states were issued loans to set up their the revolving funds. In 1978, two states (Pahang and Perlis) received the revolving funds; in 1979 five more states (Johor, Kelantan, Melaka, Perak and Pulau Pinang); in 1980 two states (Selangor and Negeri Sembilan) received the M\$5 millions revolving fund. Then during the 4MP the government increased this revolving funds to \$20 million for each state. This was as a measure to accelerate public low cost housing, while awaiting project loans from the federal government. (Malaysia, 1981;365, Malaysia, 1986; p.522).

SUMMARY AND CONCLUSION

In the attempt of providing affordable houses to lower-income groups, government had increased the low-cost housing targets from 120,600 in 3MP by the public sector to 406,100 in 4MP and 495,000 in 5MP by both the public and private sector. In the three five-year plans, the public sector target increased to 286,510 houses in 4MP but decreased to 120,900 houses in 5MP. The private sector expected to build low-cost houses a bigger number of low-cost houses than the public sector in 5MP with a target of 374,100. However, the achievement of this low-cost houses by both sectors was low; 55% in 3MP, 37% in 4MP and 33% in 5MP respectively. Similar performance achieved if taking only the public sector; 55% in 3MP, 42% in 4MP and 45% in 5MP.

PLCHP is the centre piece of the public housing programmes because a large proportion of houses targetted and completed was contributed by this programme. This PLCHP too faced target shortfall and in addition its achievement between plan and between states was varied. This programme had completed its target only 36% in 3MP, 42% in 4MP and 57% in 5MP. When houses not completed within the plan, they had to be carried forward to next plan or were cancelled. Uncompleted houses were large in numbers in each plan. In 3MP, 44,670 houses or 61% of the target carried over to 4MP while 6,591 houses or 9% of the target cancelled. Then in 4MP, 42% of the target completed while only 13% carried over to 5MP and another 45% either

transferred to the SLCHP or cancelled. During 5MP also the similar problem of target shortfall occurred, where only 57% of the target achieved, 36% carried over to next plan and 7% cancelled. Thus, target shortfall become a common problem occurred in every plan.

Financial shortfall was another problem occurred to this programme in the three five year plans. Analysis from tables presented in this chapter show that in general funds were under-utilised where only 69% was spent in 3MP, 89% spent in 4MP and 76% used in 5MP. This financial shortfall occurred as the result of state governments were unable to spend funds provided because large number of targetted houses were not completed within the plan.

Increase of funds allocation was made in 3MP and 4MP catered the increased number of targets as well as covered the increased in costs. The analysis found that increased in funding was higher than the increase in targets, where in 3MP allocation of fund increased by 23% in nominal price catered 13% increased of target. During 4MP Revision in 1984, allocation of funds increased by 168% whereas target only increased by 7%. This large increase in allocation implied the increase in costs which associated with the effect of inflation.

Therefore it can be concluded that the main problem of the public housing programmes in Malaysia was target shortfall, where by the end of five year plans a large percentage of public houses intended to build were not completed. As the result, funds were under-utilised. Although several efforts and measures were undertaken by the government to overcome this, yet the problem still occurred from one 'five year plan' to another.

It was realised that implementation as the main factor affected the performance of five year plan as stated in 5MP document that: "The impact of the social services programmes on the desired socio-economic objectives is dependent not only on resource availability but also on the capacity to implement." (Malaysia, 1988; p.271). The implementation of the public low cost housing programme was done through inter-governmental and inter-agency relationships. Implementation was difficult and demand a high degree of co-operation. This research is concerned with the inability of the programme to produce its result in relation to time, quantity and cost. The focus is not on the impact or the quality of the product but more modest question of output. Therefore implementation studies could draw some insight and parallel perspective to explain the phenomenon under investigation.

In this chapter also describes several policies and strategies introduced by government to improvement achievement of low-cost housing in general and PLCHP specifically such as formation of the committee to monitor housing development in each state, fixing the price of low cost houses of not exceeding M\$25,000, instruction to financial institution to provide loans for low-cost housing mortgages, provision funds for land surveying, allowing EPF withdrawals to assist in house buying,, attempting to buy low cost houses from private developers and re-sell them to low income groups.

The following chapter, discusses the hypotheses developed for this study drawing out the problems and issues that have been discussed in chapter two on "implementation literature", chapter three on "population growth and housing construction" and chapter four on "public housing development".

ENDNOTES

¹ Although in the 4MP document stated that the amount of funds allocated as \$1,712.22 million, the actual funds finally allocated by the Treasury for this programme was even larger. An amount of \$2,695 million was finally agreed when the central agencies reviewed allocation based of 'project by project' basis for the state governments in 1984.

² The total of 262,000 houses to be built consisted of 100,000 targeted for private housing developers, 12,000 targeted for co-operative societies and 150,000 were to be built by individuals and groups.

³ The target figure for the 3MP of 73,500 was obtained from the Mid-term Review of 3MP (Malaysia, 1978; p.216).

⁴ In 1980 the Ministry of Finance, Malaysia reported a strong demand for residential, commercial and industrial building construction activities which had boosted value added in the construction sector by 15%. Strong demand in housing was associated with housing property boom and adjustment of salary for public servants in July 1980. The rapid increase in demand for the housing resulted to pressure on house price increases (Malaysia, 1980; pp. 17, 123 and 124). High demand for housing because of speculative purchase of new and additional houses by the rich who put their money in this type of investment in anticipation of price increase or for a high rental (Khor, 1983; p.146). Housing speculation in late 1970s and early 1980 had resulted 'chronic shortage' and 'soaring of house price' until the government introduced a preventive policy and also slow growth of economy in the 1980s.

⁵ Housing components include the PLCHP in the states and Federal Territory Kuala Lumpur, sites and services scheme, purchase of housing in the Federal Territory, government quarters, government officers housing loan scheme, loan to SEDC, complimentary public housing and squatters control in the Federal Territory. Allocation provided under 4MP for these housing component totalled up to \$4066.5 million (Malaysia, 1984; Appendix A).

Chapter Six

DEVELOPMENT OF RESEARCH HYPOTHESES

Introduction

This chapter explains the research hypotheses developed from the insights of previous chapters on policy implementation studies and public housing development in Malaysia.

Hypotheses are tentative statements about matters whose validity before testing is usually unknown and they frequently take the form of relationships between two or more variables that are observations of common elements in the real world. Hypotheses come from our thoughts and are manifested as tentative statements about things that the researcher wishes to support or refute (Black and Champion, 1976; p.126). In research, hypotheses serve one of three purposes: (a) to test theories; (b) to suggest theories; or (c) to describe social phenomena.

The literature review on implementation studies identified a range of factors affecting programme performance, such as vague objectives, faulty assumptions, inadequate initial conditions, lengthy processes, delays, interorganisational and intergovernmental relationship problems, insufficient funding, inadequate resources, the incapability of government, inappropriate implementation design and many other factors. A number of implementation issues were raised, such as the possibility of programme failure being caused by defects during policy formulation and design or by the planning process as well as during policy implementation. Many scholars have attempted to explain difficulties in implementation, but it can be said that consensus on factors capable of predicting effective implementation has not yet been achieved.

Overview of public housing development in Malaysia have confirmed that housing supply to lower income people is inadequate, in spite of the national housing objective of providing adequate housing for this category of people. Measures to achieve this objective were made, including setting targets of low-cost housing to be built by the end of the five-year plan. However, the targets were never met and thus expenditure shortfalls occurred.

Programme Performance

Several concepts measuring programme performance are highlighted in the literature, including “success and failure”, “effectiveness”, “goal-directed”, “achievement of objectives” and “output”. Public policy performance is usually measurable. For example, in EDA’s case, performance was measured by ascertaining whether implementation was successfully carried out and by determining the number of jobs created, examining those who were hired, and assessing the progress of public works projects. Van Meter and Van Horn (1975) suggest that availability of resources and incentives are amongst the cluster of variables that shape the linkages between policy and performance. Van Horn (1979) views performance as a “proximate effect” which “...[is] directed at determining the consequences....and the degree to which programs and services provided by the law are delivered to the intended beneficiaries” (Van Horn, 1979; p.10). In this case, the performance measures are used to assess whether or not such goals are realised, an assessment which can be carried out after one has identified and understood public policy objectives (Van Horn, 1979; p.10).

For the purpose of this thesis, programme performance focuses on target achievements in relation to: (a) the number of houses built within the same five-year plan or outside the intended plan and the number of uncompleted houses; (b) the time taken to complete the implementation process, and (c) the amount of funds utilised and the total project cost.

RELATIONSHIPS OF IMPLEMENTATION PROCESS AND PROGRAMME PERFORMANCE: HYPOTHESIS 1

In this thesis, the researcher posits that programme performance is related to the implementation period, the length of time taken in the implementation process, the adequacy of funding, the effect of inflation, the interaction of programme implementers, and of agencies and actors at the bottom. A hypothesis-testing approach will be conducted by making comparisons of programme performance between the three five-year plans and amongst the seven states and three types of agencies which assisted the states in implement projects.

Hypothesis 1

Implementation is a process involving the refinement and translation of a policy into specific actions or programmes directed at putting policy intentions into effects, or the forging of subsequent links for achieving desired results. This suggests that it is important to examine what is happening to policy at these various stages of the implementation process.

In analysing successful implementation, Pressman and Wildavsky (1973) called for fewer steps because innumerable steps and numerous activities caused 'implementation deficits'. Besides fewer steps, Cleaves (1980) proposed a shorter duration for implementation. He believes that longer programmes are more problematic, stating that:-

“... the greater the duration of sequential steps involved in the implementation stage, the greater the possibilities for existing actors to alter their goals, for leadership to turn over, for new actors to enter the scene, or for unintentional consequences to take their toll.” (Cleaves, 1980; p.289).

Several people have pointed out that delay in obtaining clearance for housing development approvals was one of the difficulties in Malaysia's housing implementation process. This difficulty is associated with a long approval process, administrative delays and bureaucratic red-tapes (Hong, 1991; p.8; Rachagan, 1992; p.26) where the process went through some 40 major steps and passed through several government agencies (Johnstone, 1983; p.256; Sen, 1986; p.29; HDAM, 1990; MHLG, 1991). There was also no time limit imposed for processing approvals (Yin, 1993). This was followed by a lengthy process for land conversion where, as a result, the time taken for obtaining planning approval ranged between three and five years (Teo, 1991; p.27). Similarly, PLCHP also faced difficulties in relation to administrative delays (Agus, 1992; p.15) and the incapability of agencies at local level of implementing public housing projects (Agus, 1992; p.24). Although efforts were made to shorten the duration of each step, no attempt was made to reduce the number of these steps (MHLG, 1991a; p.2). The time frame given to complete a housing project in five years was inadequate because the whole process required more than five years, as shown by the large number of houses carried over to the next five year plan discussed in Chapter 5. This programme also encountered several implementation problems during the planning stage such as inadequate preparation (Endan, 1984; p. 67-68), indecisiveness about projects (MHLG, 1991a), site selection problems (Ooi, 1983; p.40; Endan, 1984; p. 70; MHLG, 1991a), land problems (Agus, 1992; p.15)

and problems relating to obtaining planning approval (Agus, 1992; p.18-19). Hence, this justifies a detailed examination of the process involved with the implementation of PLCHP, with special emphasis on the planning stage.

Davies (1981; p.47) asserted that over-optimistic targets for public programmes in the five-year plan were perceived as normal and inevitable by civil servants and subsequent deviation from targets were accepted as a usual occurrence. When the 3MP was formulated, those involved in the programme formulation knew that the shortfall of PLCHP's targets for the previous plan was 72%. Similarly despite 64% shortfall of the previous plan, 4MP aimed at building 176,500 houses within this plan. About 40% of 4MP's targets were achieved by the end of the plan, while other 60% (about 104,000 units) were either carried over to 5MP under the same programme, transferred to the special low-cost housing programme or were cancelled. Finally, when 5MP was formulated a moderate target (45,800 units) was set.

It is predicted that the public low-cost housing programme performance is associated with inadequate preparation of schemes during the formulation and planning stage, the lengthy implementation process involved and that in itself this varied between planning periods, states and implementing agencies. Therefore hypothesis 1 is formally stated as the following:

Hypothesis 1: "That the implementation performance of the Public Low-cost Housing Programme in Malaysia is associated with inadequate of preparation of schemes at the formulation and planning stage, the length of time taken in the implementation process, and that this varied between planning periods, states and implementing agencies."

From hypothesis 1, four detailed statements are developed as instruments to assist the testing of this hypothesis as follows:

Statement 1a: "That a large proportion of public low-cost housing projects have a completion time of more than five years."

Statement 1b: "That projects where some preparation was made before the formulation stage had shorter completion times than projects where preparations were made during the formulation stage."

Statement 1c: *“That the earlier implementation stage is significantly related to the subsequent stages. When a longer time is taken to complete the planning stage, then a longer time is needed to complete the whole project implementation process.”*

Statement 1d: *“That the length of time spent on the whole implementation process varies significantly between five-year plans, states and implementing agencies.”*

This hypothesis aims at analysing relationships between the time taken in the implementation process as a dependent variable, and the implementation periods (three five-year plans) and programme implementors (states and implementing agencies) as independent variables.

In each five-year plan, there were differences in terms of the programme setting. The formulation of 3MP was based on the foundation of the New Economic Policy launched in the previous five-year plan (2MP, 1970-1975). The 4MP period marked further elaboration and refinement of policy measures set in previous plans and was also the period during which some of the NEP targets were to be realised (Cho, 1990; p.76). During 4MP Malaysia's economy performed strongly and more resources were devoted to development projects. As mentioned in chapter 5, several measures were taken to improve PLCHP, such as adopting ‘promotional incentives’ in 3MP, creating new programme implementation guidelines in 4MP, expediting and strengthening implementation capability and adding more funds to the programme in each five-year plan (Malaysia, 1978; p.211, 278 and 33; Malaysia, 1983; p.222). Eight measures increase housing stocks were introduced by the government (Malaysia, 1981; p.365). Then, during 5MP, the country experienced a recession; however the government's policy still emphasised housing for low-income people, but with a smaller allocation of funds and lower targets.

RELATIONSHIP OF FUNDING AND PROGRAMME PERFORMANCE: HYPOTHESIS 2

Resources are important to any programme and a lack of resources is usually cited as reasons for the implementation failure. The literature suggests that resources as one amongst other variables that have significant relationships with programme implementation (e.g. Chase, 1979; Durant, 1984; Edwards, 1980; Elmore, 1978;

Hogwood and Gunn, 1984; Hambleton, 1983; Montjoy and O'Toole, 1979; Weimer, 1983; etc.). Wolman (1980) recognised that resources must be adequately provided for a successful implementation. Van Horn (1979) states that there are two aspects of programme resources: the timing of the funds and the size of the funds in relation to the size of the community. He argues that the way in which program funds are used depends in large part on when they are available for use by state or local government officials and whether they represent a significant enlargement of total resources or only a small increment (Van Horn, 1979; p.14). Barret and Fudge (1981) suggest that putting policy into effect is basically dependent on four factors, of which two are related to resources: (1) the availability of the required resources; and (2) the ability to marshal and control these resources to achieve the desired ends. The other two factors are: knowing what you want to do, and; if others are to carry out the tasks, communicating what is wanted and controlling their performance. Sabatier and Mazmanian (1980, p.542) highlight financial resources as one of the variables for policy implementation. Edwards (1984) claims adequate resources are amongst the four pre-conditions for successful implementation, where the other three are effective communication, supportive dispositions of implementers and an appropriate bureaucratic structure. Pressman & Wildavsky also described lack of resources as one of the problems in policy implementation. Weimer (1983) identified seven sources of implementation failures, each of which is related to some degree of scarcity of resources and inflexibility of expertise resources. Hogwood and Gunn (1984; p.199-200) suggested ten pre-conditions necessary for achieving perfect implementation; among others this includes adequate time and sufficient resources being made available to the programme and the required combination of resources being actually available.

Montjoy and O'Toole (1979) proposed an intra-organisational implementation theory and cautioned policy makers to ensure availability of resources to an organisation and to consider the consequences of issuing mandates without accompanying resources. Like Montjoy and O'Toole, Cleaves emphasises the two factors of political power and resources, which must be considered by implementers and policy makers for successful implementation. Cleaves concludes that many policies formulated in Third World countries are highly problematic and have few resources for their execution (1979, p.292).

In relation to the provision of resources for PLCHP, three major issues of project funding were identified. Firstly, there was a financial shortfall in each five-year plan because the states were unable to spend the funds within the same plan as the result of target shortfall. Secondly, the percentage of expenditure utilised was higher

than the percentage of houses completed. Thus, it is suspected, the consequence of inflation where increased of project costs over time. It is predicted that delays in project implementation led to more time taken, and with inflation this simply increases costs (nominal costs). Delays also arise from poor project preparation, where some schemes were revised and this led to more resources were used (i.e. higher real costs). Thirdly, although increased funds were provided, target shortfalls still persisted.

Increased allocation of funds to the programme was one of the measures adopted to overcome implementation problems (Malaysia, 1976; p.337). For example, during 3MP a substantially increased allocation was made where M\$640.09 million was provided compare to only M\$234.8 million for the plan before. During 4MP the government anticipated bigger roles in housing provision with the biggest allocation of funds and the largest target so far. An allocation of M\$1,712.22 million was provided. Attempts to alleviate target shortfall were made through bigger allocations and the establishment of revolving fund for each state. However, problems still persisted as indicated by target and expenditure shortfalls.

In this study a hypothesis is developed to examine the issue of programme funding and financing as an aspect of programme resourcing. The aims are to examine relationships between programme funding and programme performance, and the effects of other variables, such as the period of programme implementation, the states and implementing agencies as well as the differences arising from these relationships. Realising the importance of funding to the programme therefore the following hypothesis concerning programme funding is developed:-

Hypothesis 2: *“That the performance of the public low-cost programme is dependent on the allocation of resources devoted to it; delays in implementing projects caused costs to increased in real terms with inflation; as a result the states have to meet project cost from their own funding.”*

Four statements are developed to assist the testing of hypothesis 2 as follows:

Statement 2a: *“That the amount of funds provided by the federal government for the public low-cost housing programme varies significantly between five-year development plans and between states.”*

Statement 2b: "That the amount of funds provided by the federal government for the public low-cost housing programme was lower than the total project cost."

Statement 2c: "Programme implementation performance is associated with the availability of funds; projects which utilise financial "revolving funds" exhibit better performance than projects which do not utilise financial "revolving funds."

Statement 2d: "That there is an association between the total project costs and the length of time taken for project completion; the longer the time needed for the project implementation process, the higher the project costs."

Statement 2d is the most important because it attempts to relate project costs to the time taken to complete the project. It is predicted that as the result of delays, projects were affected by inflation, which caused increase of costs for two reasons: delays means projects were affected by inflation and inadequate preparation meant higher cost were incurred.

INTER-ACTION BETWEEN ACTORS AND AGENCIES: HYPOTHESIS 3:

The process of implementation often involves inter-organisational networks of (a) different levels of government including federal, states and local agencies; (b) public and private organisations; and (c) political and administrative bodies. These types of structure thus affect organisations and actors who jointly deal with specific tasks and programme objectives. Rein and Rabinovitz (1978; p.327-328) view complexity of the implementation process as a function of the number of levels, agencies and participants who have a say in the process or are capable of voiding any stage along the way. The notion that implementation face difficulties in the realisation of intended policy objectives because it requires inter-agency co-operation and co-ordination is supported by many authors, and both the top-down and bottom-up approach. The difference between these two approaches lies in the varying viewpoints as to the actors involved in the interaction, and whether the direction of action is from the centre to the periphery or at the local level.

In the study of PLCHP it is predicted that interaction between agencies and amongst actors at the bottom has a relationship with programme performance. This is because, in the attempt to achieve the goal-directed programme targets implementers must take into consideration the effect of departmental requirements imposed on this programme and the interests of other actors who are connected with the programme. Therefore hypothesis 3 is formally stated as follows:-

Hypothesis 3: "That the interaction between agencies and amongst actors at the bottom has a significant relationship with the performance of the public low-cost housing programme in Malaysia."

In implementing the programme, the state has to deal with a number of agencies and actors concerned with the programme and whose agreements and sanctions have to be obtained in order to carry out the programme. Some of these actors and agencies are not bound by the pressure of achieving the targets, time and cost limit constraints faced by the programme, but are more concerned with imposing their own interests. Therefore hypothesis 3 also aims to research how the states and implementing agencies deal with this interaction of actors and agencies at the bottom.

CONCLUSION AND SUMMARY

If 'implementation' is defined as 'action ... directed at the achievement of objectives set forth in prior policy decisions' (Van Meter and Van Horn, 1975; p.445) then the focus of PLCHP's performance is on measuring how far the programme has achieved its intended objectives. In this chapter this researcher posits that programme implementation process, adequacy of funding, interaction of agencies and actors at the bottom and other project characteristics have a significant relationship with programme performance. Programme achievement in this study is expressed in terms of number of houses built at the end of the five-year plan, whether projects were completed within the same plan or outside the intended plan, the length of time taken for implementation and finally the total costs incurred by the projects.

The method of testing for these first two hypotheses is a combination of quantitative and qualitative techniques, whereas hypothesis 3 engages only the qualitative approach. Explanation of the research methodology adopted in this research is presented in the following chapter. A survey report of the quantitative data analysis that examines the general patterns and trends of PLCHP is presented in Chapter 8. Chapter 9 contains the presentation of qualitative data analysis. Chapter 8 and 9 serve

to give some indications about hypotheses developed in this chapter. Finally, the testing of these three hypotheses and the decisions about them are formally presented in Chapter 10.

Finally, as a concluding remark to this chapter, a proposition by O'Toole (1986) on an agenda for implementation research may stimulate further insight:-

“The review of empirical literature suggests some implicit agreement on several clusters of variables deserving of further intensive investigation. Efforts should be undertaken to build systematically and cumulatively on the research that focused on policy characteristics, resources, implementation structure, implementor disposition, implementor-client relationship and timing.” (O'Toole, 1986; p.203).

Chapter Seven:

RESEARCH METHODOLOGY

Introduction

This chapter presents the research methodology adopted for the study and describes each step in data collection: preparation of a sampling frame, sampling criteria, sample selection, gathering of data into a 'collection roster', conducting interviews, transcribing interviews and data analysis technique. Quantitative data were collected during three and half months' fieldwork researching the programme's "administrative records"⁽¹⁾ in Malaysia from early February to mid-May 1994. Then a second stage fieldwork collecting qualitative data was carried out over almost two months in Malaysia during November and December 1994.

This chapter consist of four sections: section one provides a general overview of the study approach; section two discusses the quantitative approach; section three discusses the qualitative approach; and, section four discusses general issues, constraints and limitations of this study.

Quantitative and Qualitative approaches

There are two broad approaches to research: the quantitative and qualitative methods. Quantitative research is generally concerned with measurement and is characterised by structured and standardised data collection using surveys and experiments (Walker, 1985). The quantitative approach is characterised by an emphasis on measurement, analysing causal relationships between variables, and inferring generalisation found in the samples to the general population. While qualitative research emphasises concepts and categories, not their incidence and frequencies.

Qualitative research also analyses the process and not relationships between variables. Qualitative research stresses the socially constructed nature of reality, the intimate relationship between the researcher and what is studied, and the situational constraints that shape inquiry.

Bryman and Cramer (1992) propose a model of quantitative research as highlighted in Figure 7.1. In this model a research process begins with a theoretical domain where problem statements, concepts and hypotheses are derived. Likewise, the testing of theory is employed by deducing research hypotheses. A hypothesis commonly takes form of a relationship between two or more entities. Concepts in hypotheses are translated into operational definitions to determine the variables to be measured. The next stage is to find the subjects or respondents to be studied. In the model, there are two types of research designs in quantitative method: the survey/correlational design and the experimental design. This process then proceeds to data collection, data analysis and findings. Analysis of data involves examining relationships between research variables and statistical tests to establish their significance and finally the decision as to whether, to accept or reject the research hypotheses. Finally, research findings are subsequently incorporated into a body of theory.

The second approach is a qualitative research method: an inquiry in the form quantities of data in words and ideas rather than numbers and statistics (Miles and Huberman, 1984; p.15, Rudestam and Newton, 1992; p.113)⁽²⁾. The word *qualitative* also indicates “...*processes and meanings that are not rigorously examined, or measured (if measured at all), in terms of quantity, amount, intensity, or frequency*” (Denzin and Lincoln, 1994; p.4). This approach generally views the individual or organisation in a holistic manner, rather than reduced to isolated variables and hypotheses. Qualitative research designs are not intended to test a theory, but engage the inductive approach whereby theory will emerge once the data are collected and

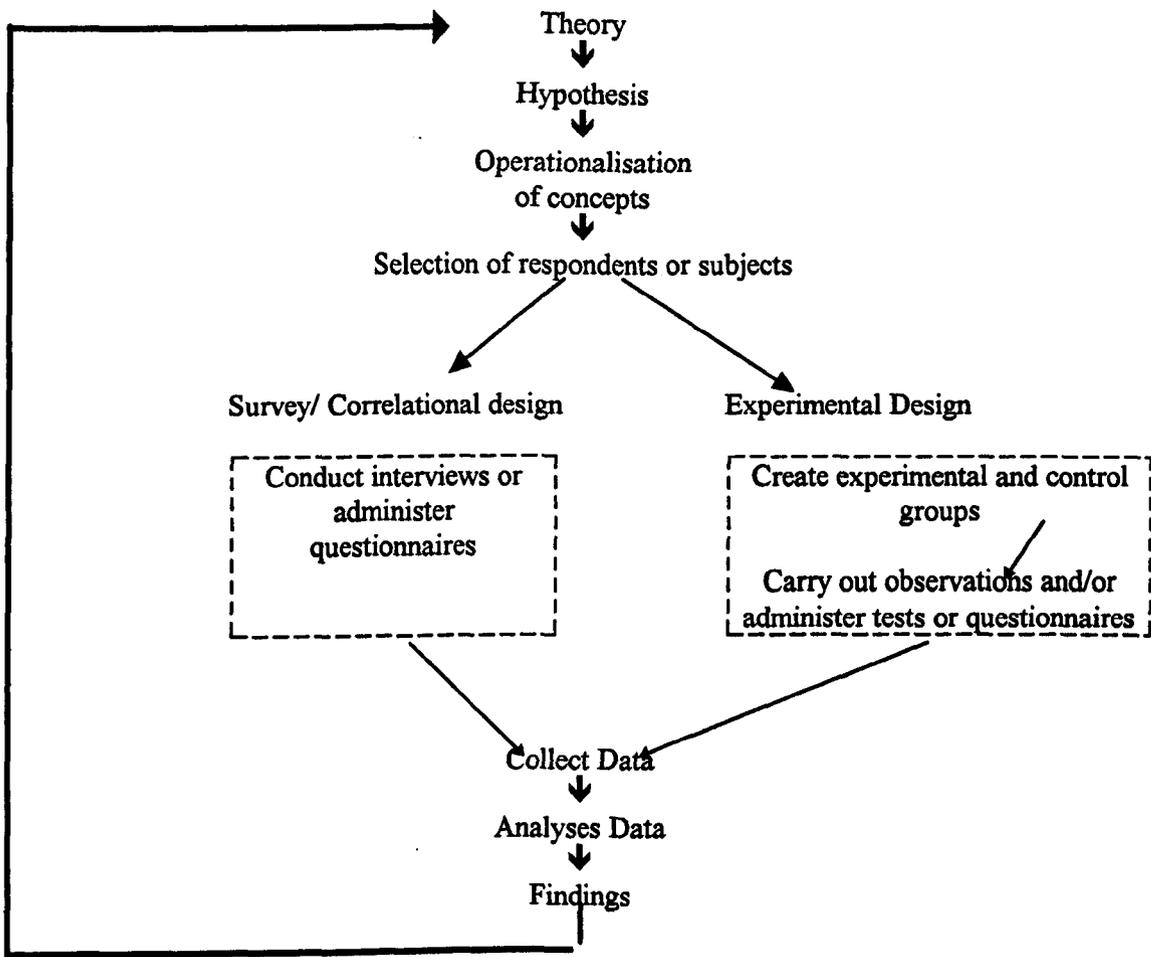


FIGURE 7.1: RESEARCH PROCESS AND HYPOTHESES FORMULATION

Source: Bryman and Cramer, 1992; p.3

analysed. Pure qualitative research usually emphasises hypothesis generating rather than hypothesis testing. Miles and Huberman (1984) describe qualitative data analysis as involving three concurrent flows of activity: data reduction, data display and conclusion drawing/verification. Data reduction applies to the process of choosing, focusing, simplifying, summarising and transforming the raw data collected during the field work. Data display is an arrangement of information to enable drawing of conclusions. Finally, conclusion drawing/verification is involved by noting of regularities, patterns, explanations, possible configurations, causal flows and propositions.

Brannen (1992) points out three major differences between these two approaches: (a) how variables and the formulation of hypotheses are viewed; (b) how data collection is viewed, and (c) extrapolation and generalizability. The quantitative researcher identifies variables and defines variables and variable categories. These variables are linked together to form hypotheses before data are collected. In contrast, the qualitative researcher begins by defining very general concepts. Then, as research progresses, the researcher changes their definitions. For the quantitative method, variables are the crucial instrument of the analysis. In contrast in the qualitative method, they may constitute the product or outcome.

Denzin and Lincoln (1994) highlight five points of differences between quantitative and qualitative research: in terms of the use of positivism, acceptance of post modern sensibilities, capturing individuals' points of view, examining constraints of everyday life, and securing rich descriptions. These differences are as a result of their commitment to the different style of research, different epistemologies, and different forms of representation. Quantitative research uses mathematical models, graphs, tables, statistical tests, and impersonal (third person prose) when writing about research. In contrast qualitative research, among others, uses ethnographic prose, historical narrative, first person accounts, still photographs, life histories, fictionalised facts, and biographical and autobiographical materials (Denzin and Lincoln, 1994; p.6).

Combined Quantitative-Qualitative Methods

Why combine research methods? A combination of research methods implies rich opportunities for cross-validating and cross-fertilising research procedures, findings, and theories (Brewer and Hunter, 1989; p.13). It was diverse methods, ('multiple measurement' or 'triangulation') to tackle a research problem. It provides tools for interpreting convergent and divergent evidence from several sources. It is argued that a researcher ought to be flexible and therefore ought to select a range of methods, appropriate to the research problem under investigation.

Despite the advantages of the combining methods, care and precision are needed at all stages of the research process, from the design stage to the writing up

(Brannen, 1992; p.17). Combined methods are not necessarily superior to a single method. However, when properly combined, they will enhance the research (Bryman, 1992; p.33).

Bryman (1992) suggests three ways of combining multiple methods in the research process: (a) qualitative work as a facilitator of quantitative work; (b) quantitative work as facilitator to qualitative work, and; (c) giving equal emphasis to both approaches. The first category, where qualitative work as a facilitator of quantitative work serves for: (a) source of hunches or hypotheses to be tested; (b) developing and piloting research instruments, and; (c) interpretation and clarification of quantitative data. The next category where the pre-eminence of the qualitative over the quantitative serves for: (a) providing quantified background data in which to contextualise small-scale intensive studies; (b) quantitative methods to test hypotheses thrown up by the qualitative work, and; (c) quantitative work may provide a basis for the sampling of cases and comparison groups which form intensive study. Finally, when the qualitative and quantitative are given equal weight, they are to link studies which are distinct from one another at all stages of the research process. These two types of data are treated as complementary to one another. This study adopted the third approach of giving equal weight and complementary to one another approach. The quantitative data served to provide general pattern about the topic, whereas qualitative data accommodated detailed explanations about the problem. The quantitative approach also helped the researcher to narrow down the choice of cases, guided by the criteria obtained through the quantitative approach

The process of combining approaches and methods must consider several other factors. First, on the issue of the relative importance given to each approach within overall research. Second, on the issue concerning time ordering; whether to carried out both approaches simultaneously or consecutively. Third, on the issue concerning at what stage in the research process, the respective methods come into play.

GENERAL OVERVIEW ON THE STUDY APPROACH

This study is an inquiry into the implementation of the public low cost housing programme in Malaysia. This study focuses factors limiting the achievement of the programme's performance. The study aims to describe the prominent features of the programme's components and to provide a detailed account of the programme's implementation process.

The study employed quantitative and qualitative methods in gathering information to answer the research question. The researcher conducted this study in two stages. The first stage was conducted using a quantitative approach, by carrying out data collection from project records. The objectives were to study the pattern of the projects' implementation process as well as to investigate relationships between variables which accounted for the programme's performance.

The second stage data collection was a qualitative approach, conducted through guided interviews with those involved in the programme's implementation. The objective was to provide an explanation and detailed description of how the programme was implemented through several selected projects initiated in the Third, Fourth and Fifth Malaysia Plans. By inquiring into the process of programme implementation about these projects, the researcher intended to identify factors limiting the programme's performance.

Research design

A research design is a plan of attack on what information a researcher needs to generate to complete a study (Castetter and Heisler, 1981; p.16). Thus, it is emphasised in any scientific investigation must begin with some structure or plan (Spector, 1981; p.19). A research design is a plan of study related to the gathering of information to enable the researcher to answer questions posed in the statement of the problem. The study design is a preconceived notion of what data to generate, why they are required, how they are acquired and how they are refined, related to the statement of the problem. However, a research design must be practical and is limited by money, time and personnel. According to Spector (1981), investigation requires several steps to complete. First, by formulating a research question. The question can be in the form

of a hypothesis that predicts the occurrence of relationships among variables or it can be of asking what kind of relationship among variables exists. Second, is to plan the design of investigation. This involves the choice of variables, procedures, control, randomisation plan, and where and how to collect data. The third step is the decision on the operationalisation of dependent variables, that is the statement of procedures used to create their levels. The final step, is to conduct the study or data collection itself.

The approach of this study is to use a combination of both *quantitative* and *qualitative* techniques. The quantitative approach will be used to analyse the general pattern of the programme and to gain a general overview before selecting cases for further detailed studies. The quantitative technique is employed to confirm or reject hypotheses about performance for the period between 1976 and 1990. The qualitative research method is used to provide richness of data on the processes of policy implementation that was not captured by the quantitative approach. Since the quantitative approach collects data based on several pre-conceptions and intervention at certain points, it is unable to look into the whole implementation process. The qualitative approach seeks to answer the research question from the perspectives of programme participants and relevant actors.

This study adopted the triangulation approach especially for the hypotheses testing. The quantitative data provides the background and general pattern on programme implementation in the five-year plans, states and implementing agencies. Whereas qualitative data provides description of what was going on at the project level.

Data collection method

The structure of the data collection method for this research is divided into two stages as follows:-

Stage One:

Limited by resources and time, a decision was made to study a sample of about 20% from the estimated 1,000 public low cost housing projects formulated between 1976 and 1990. As a result, 215 projects were selected through *disproportionate stratified random sampling* from a sampling frame of 624 projects carried out in seven states of West Malaysia. Each project was stratified into four elements:-

- (1) the “five-year plan period”,
- (2) the “location” (states),
- (3) the “implementing agency” and
- (4) the “status of completion.”

Seven states were selected, enabling this researcher to make comparisons between each of the three types of implementing agencies engaged in the programme.

The next task was to gather relevant data about each project selected. This included project resourcing, cost and financing, steps and length of the implementation process from inception until completion, and the targeted and actual output of the project. This study aims to discover the general pattern and degree of relationship between selected variables by statistical methods. Data were collected from programme records, files and documents which are available from government departments.

The main source for data collection for this stage came from the programme's administrative records, in the form of project files which are kept by related government agencies. The majority of these records are kept by the Ministry of Housing and Local Government (MHLG). In addition, information for the projects is

also kept by the Housing Division of the state governments, the implementing agencies, the Treasury, and the Economic Planning Unit (EPU) at the Prime Minister's Department. These files provided information on the progress of projects from their inception until completion. They provide accurate records on cost, time and number of houses completed.⁽³⁾ Detailed information was also sometimes available about who were involved and responsible for the projects, who made decisions and how they were made, the cost of the programme, the process involved and trends and patterns of the process over time. Finally, additional information was obtained from several progress reports, project documents, agreements, minutes of meeting, etc.

Data from programme records were transferred into a "*data collection roster*" which resembled a questionnaire format. The aim was to input data which were systematic, consistent and easy to code for computerised statistical analysis. A pilot test was also carried out to check the suitability of this roster for capturing the required data. The roster was improved after the pilot test had been carried out.

Stage Two:

The focus of this stage was on a qualitative approach, with the aim of providing rich data, getting the story from the perspective of the people involved in the programme. Information from the quantitative data in the first stage facilitated the selection of cases in the qualitative approach of the second stage. The study of the second stage aimed to provide detailed descriptions of programme implementation and to understand particular problems or situations in greater depth. It provided answers in a qualitative manner to the questions of factors limiting programme achievement. A small number of projects was selected as case studies from the list of projects sampled in the first stage. Information gathering was carried out by guided interviews with those involved in the programme implementation.

QUANTITATIVE APPROACH

To meet the research objective, testing of hypotheses and to understand the implementation pattern of public low cost housing projects, a plan of study for the quantitative approach was prepared consisting of six main steps. The first stage began with the preparation of a sampling frame of 624 projects based on the four strata, then the drawing of cases by *disproportionate stratified sampling*, followed by gathering of data from the programme's administrative records into a *data collection roster*, entering data into the computer, carrying out statistical tests and their interpretations and finally writing the results of analysis. The following is the summary of the study approach:-

Step 1: Prepare a Sampling Frame

Step 2: Sample Selection

Step 3: Data Gathering into a Roster

Step 4: Data Entry into Computer and Data Checking

Step 5: Statistical Tests and Data Analysis

Step 6: Writing of the Results.

Step 1: Sampling Frame

The first task was to prepare an accurate and valid sampling frame. This sampling frame consisted of a list of all projects formulated during the three five year plans between 1976 and 1990.⁽⁴⁾ Then, a selection of samples was made from this sampling frame.

The initial step in preparing the sampling frame began with searching lists of formulated projects in each five year plan. Usually at the beginning of each five-year plan, project submissions were compiled by the MHLG after approval by the 'Economic Planning Unit.' Another project list was also issued during the five year plan revision. Searching through files at MHLG assisted in the preparation of a list of projects formulated during each five year plan. The next step was to collect progress reports prepared by state governments, reporting on the progress of each formulated

project. Then, project files were traced and checked. Comparing and assessing three sources of information assisted in preparation of a '*tentative sampling frame*'. Working on the compilation of a sampling frame required a considerable amount of time in order to trace, check and compare all the projects available from the programme's record files. The reason for this was that the researcher had to trace each project's progress in order to assign its completion status. During visits to state secretariats the list of projects in this sampling frame was re-checked once again to ensure its validity and reliability. Amendments and modifications to the lists were made once the researcher was satisfied with the information gathered about the project. The sampling frame was considered finalised once the '*tentative sampling frame*', based on records available at MHLG was compared with records searched during the visits to states.

The list of projects in the sampling frame was arranged according to four strata; the five year plans, states, implementing agencies and projects' completion status. The purpose was to enable selection of cases representing: (a) projects initiated in the three five-year plans between 1976 and 1990; (b) projects initiated in the seven selected states (see below); (c) projects that were implemented by each of the three type of agencies, and; (d) all types of project completion status. This process was a laborious task because the searching for files and progress reports that dated back as far as 1975. Since this research deals with past projects, searching of records involved investigating piles of dusty files, reports and papers in the store rooms.

One of the most difficult tasks was to find out information about the 'status of completion' for each project. This means that the progress of all projects was traced in order to assign 'the status of completion' code in the sampling frame. After the sampling frame had been completed, the task related to sample selection could be carried out.

Location of the records

The information on the PLCHP projects was largely kept in each of the project files at the three divisions of the Ministry of Housing and Local Government, i.e. the

Research and Development Division; the Planning and Development Division and the National Housing Department.

(i) *The Research Division* was given the task of co-ordinating and monitoring the programme after the internal reorganisation of the Ministry in 1991. Nearly all of the programme files since 1971 are available. These project files were transferred from the former Housing Trust (abolished in 1976) and handed over from files from the MHLG's Planning and Development Division.

(ii) *The Planning and Development Division* co-ordinated the programme from 1976 to 1991. Some of the relevant records which were not handed over to the Research Division are kept by this division.

(iii). *The National Housing Department*, provides detailed records of all projects under the responsibility of this Department, including detailed drawings of layouts and buildings, tender specifications, communication with states' governments, planning and building approvals, etc. However, for the purpose of this study the relevant records are mainly for projects in Perak and Johor and in addition, 10 projects for Selangor, three projects for Negeri Sembilan, three projects in Pahang and one project in Trengganu.

Since the information was scattered, the task was therefore to get an overall picture of each project and to find values related to the "chosen variables." The task of linking information from various branches of the Ministry, the Housing Division at the State Secretariats and some of the implementing agencies was very time-consuming. Some of the documents in the files provided the cross reference number of other divisions' files and also file references at the Housing Division of State Secretariats. Knowing the state secretariats' files reference numbers in advance helped to speed up file searching because those files could be requested before this researcher arrived at the state secretariats.

Step 2: Sample Selection

As mentioned above, four major criteria were used in the sampling frame: the planning period, states, implementing agencies and project completion status. Detailed explanations for the said criteria are as follows:-

Five year planning period

Three five-year plans became the focus of this research; the 'Third Malaysia Plan' implemented between 1976 and 1980, the 'Fourth Malaysia Plan' from 1981-1985, and the 'Fifth Malaysia Plan' covering 1986 and 1990. Each 'formulated project' was assigned according to a particular five-year plan. Only 'formulated projects' were taken into the sampling frame. 'Formulated projects' were the housing projects proposed by the states government at each five-year plan and approved by the federal government. These projects were considered as the approved projects for a particular five year plan.

States

Seven states in Peninsular Malaysia were chosen in the sampling frame. These states were as follows:-

- (1) Johor,
- (2) Negeri Sembilan,
- (3) Selangor,
- (4) Perak,
- (5) Pulau Pinang,
- (6) Pahang, and
- (7) Trengganu.

The two most important consideration in the selection of these states were that they represented all the four regions in Peninsular Malaysia and used all the three types of implementing agencies for the programme implementation. In addition, they also represented a variety of characteristics of the states in Malaysia such as the size, degree of urbanisation, income level, population growth, etc.⁽⁵⁾ Due to financial and time constraints, five other states in West Malaysia and two states in East Malaysia were

not included in the sampling frame. Table 7.1 below shows the distribution of the number projects formulated for each of the three five year plans between 1976 and 1990 in the seven states in Peninsular Malaysia.

Table 7.1:
DISTRIBUTION OF PUBLIC LOW COST HOUSING PROJECTS BY PLANS
AND STATES BETWEEN 1976 AND 1990

State	Third Malaysia Plan	Fourth Malaysia Plan	Fifth Malaysia Plan	Total
JOHOR	20	49	2	71
NEGERI SEMBILAN	33	64	2	99
SELANGOR	65	74	0	139
PERAK	41	68	1	110
PULAU PINANG	8	22	4	34
PAHANG	48	52	9	109
TRENGGANU	18	34	10	62
GRAND TOTAL	233	363	28	624

Source: Researcher's First Stage/Quantitative Data Collection

Implementing agencies

There were, and still are, three major types of implementing agency engaged by state governments, to act on their behalf in project implementation:-

- (1) the National Housing Department,
- (2) the State Economic Development Corporations, and
- (3) the Public Works Department.

Each state is at liberty to appoint these agencies or any other agencies as they wish, to assist mostly on technical matters to do with the construction of public housing in Malaysia. Most of the states, with the exception of Selangor, engaged a single major implementing agency to implement the majority of their projects, although in certain circumstances a few projects were also given to other implementing agencies. During the period referred to by this research, however Selangor engaged all three agencies to implement substantial numbers of its projects throughout all three development plans.

Table 7.2 below shows the distribution of projects by states and their implementing agencies.

Table 7.2:

DISTRIBUTION OF PROJECTS BY STATES AND IMPLEMENTING AGENCIES

State/Agencies	National Housing Department	State Economic Development Corporations	Public Works Department	Total
Johor	68	2	1	71
N.Sembilan	3	93	3	99
Selangor	10	82	47	139
Perak	105	3	2	110
P. Pinang	-	-	34	34
Pahang	4	105		109
Trengganu	2	60		62
Total	192	345	87	624
Percentage	30.8%	55.3	13.9	100%

Source: Researcher's First Stage/Quantitative Data Collection

Status of Completion

Four categories completion status were assigned to each of the projects. The categories are as follows:

1. *'Completed Within Plan'* for a project which was formulated and finally completed within the same five-year plan.
2. *'Completed in Next Plan'* for a project which was started in one of the five-year plans and completed in the next five-year plan.
3. *'Completed in the next two plans'* for a project which was started in one of the five-year plans and completed in the next two plans or more.

4. *'Incomplete/Under construction'* for a project which was never completed or was still under construction on 1.6.1994. Some of these projects were cancelled or abandoned due to a variety of reasons. This category includes two projects which are still under construction.

The distribution of projects in the seven states according to their status of completion is shown in the following Table 7.3:-

Table 7.3:

DISTRIBUTION OF PROJECTS ACCORDING TO COMPLETION STATUS AND STATES

Status/ State	Completed Within the Same Plan	Completed in the Next Plan	Completed in the Next Two Plans	Uncompleted or Still Under Construction	Total
Johor	12	40	4	15	71
N.Sembilan	42	30	1	26	99
Selangor	47	60	6	26	139
Perak	20	56	5	29	110
P. Pinang	11	16		7	34
Pahang	13	49	16	31	109
Trengganu	26	13	3	20	62
Total	171	264	35	154	624
Percentage	27.4%	42.3%	5.6%	24.7%	100%

Source: Researcher's First Stage/Quantitative Data Collection

Sample Size and Sample Selection

Constrained by finance and time, a sample of about 200 projects was decided on during the preparation of the research proposal so as to provide a reasonably representative selection of projects in the programme between 1976 and 1990. This study selected 215 projects as the sample. Since it was necessary to gather scattered information on projects from various records at several places and to complete the

fieldwork within the three months' constraint set by the sponsor, selection of about 200 projects would have been the optimum sample size.

The '*disproportionate sampling technique*' was employed as an appropriate approach to sample selection.⁽⁶⁾ In order to reflect reasonable representativeness of projects in the data analysis, each case was given its 'weighting' depending on its ratio in the cell. The following approach was adopted by this writer for the '*disproportionate sampling*' of sample selection:

(1) *All the projects in any cell selected if they were less than three.* For example, if the cell contained two projects both of them were selected as sample for that particular cell.

(2) *A minimum of three projects selected.* If the cell had three or more projects but was too small to accommodate a straightforward twenty percent sample, then three samples at least were chosen instead.

(3) *About 20% of the samples selected if the number of projects in any cell was large enough to accommodate a 20 percent calculation.* The word '*about 20 percent*' here means that the actual number of samples selected was more than 20 percent of any straightforward calculation. For example, if in the cell there were 23 projects, a 20% calculation would suggest 4.6 projects, then 5 projects were chosen as samples.

Example of Sample Selection

This disproportionate sampling approach has overcome the problem of leaving some cells which were too small to accommodate the straightforward '20 percent calculation'. An illustration of how '*disproportionate sample selection*' for the States of Selangor in the Fourth Malaysia Plan appears in Table 7.4 below. During the Fourth Malaysia Plan there were 74 new projects formulated in Selangor. The State of Selangor assigned these projects to three implementing agencies; 10 projects to the National Housing Department, 37 projects to Selangor's Economic Development

Corporation and 27 projects to the Public Works Department. Based on the sample selection criteria above, 9 out of 10 projects were selected from projects implemented by the National Housing Department. Twelve out 36 projects were selected from the State Economic Development Corporation. Finally, 9 out 27 samples were selected from the Public Works Department's projects. The total number of samples selected for Selangor during the Fourth Malaysia Plan was 30 out of 74 projects.

Table 7.4:

EXAMPLE OF DISPROPORTIONATE SAMPLING FOR THE STATE OF SELANGOR FOR THE FOURTH MALAYSIA PLAN.

Implementing Agency	Status of Project Completion	Total Projects	Number of Samples Selected	Weighting Per Sample
National Housing Department	1. within plan	3	3	1.00
	2. next plan	4	3	1.33
	3. next 2 plans	1	1	1.00
	4. incomplete	2	2	1.00
	Sub-total	10	9	
State Economic Development Corporation	1. within plan	3	3	1.00
	2. next plan	18	4	4.5
	3. next 2 plans	2	2	1
	4. incomplete	14	3	4.66
	Sub-total	37	12	
Public Works Department	1. within plan	14	3	4.66
	2. next plan	4	3	1.33
	3. next 2 plan	0	0	0
	4. incomplete	9	3	3
	Sub-total	27	9	
TOTAL		74	30	

Source: Researcher's First Stage/Quantitative Data Collection

The summary of samples selected according to the five year plans and states appeared in Table 7.5 below. Out of 624 public housing projects implemented by seven states which covered the three 'five year development plans' a total of 215 projects have been selected for the samples for data analysis. A total of 91 samples were selected from the Third Malaysia Plan, 105 samples from the Fourth Malaysia Plan and

18 samples for the Fifth Malaysia Plan. Another Table 7.6 below shows the distribution of samples according to states, agencies and project completion status.

Table 7.5:

**NUMBER OF SAMPLES SELECTED FOR THE ANALYSIS OF THE PUBLIC
LOW COST HOUSING PROGRAMME IN MALAYSIA (1976-1990)**

State	Third Malaysia Plan	Fourth Malaysia Plan	Fifth Malaysia Plan	Total
JOHOR	10	12	2	24
NG. SEMBILAN	14	14	2	30
SELANGOR	19	30	0	49
PERAK	15	17	1	33
P.PINANG	6	9	4	19
PAHANG	18	12	4	34
TRENGGANU	10	11	5	26
GRAND TOTAL	92	105	18	215

Source:

Researcher's First Stage/Quantitative Data Collection

Table 7.6: DISTRIBUTION OF PROJECTS ACCORDING TO STATES, IMPLEMENTING AGENCIES AND COMPLETION STATUS

Completion Status	Completed Within Plan	Completed in Next Plan	Completed in Next Two Plans	Uncompleted and Under Construction	Total
States\ Agency					
Johor					
NHD	3	9	3	6	21
SEDC	0	2	0	0	2
PWD	0	0	0	1	1
Total	3	11	4	6	24 (11.2%)
N. Sembilan					
NHD	0	3	0	0	3
SEDC	10	7	1	6	24
PWD	0	1	0	2	3
Total	10	11	1	8	30 (14%)
Selangor					
NHD	3	3	1	2	9
SEDC	7	9	5	4	25
PWD	6	6	0	3	15
Total	16	18	6	9	49 (22.8%)
Perak					
NHD	6	12	3	7	28
SEDC	2	1	0	0	3
PWD	1	1	0	0	2
Total	9	14	3	7	33 (15.3%)
P. Pinang					
PWD	8	8	0	3	19
Total	8	8	0	3	19 (8.8%)
Pahang					
NHD	0	3	0	1	4
SEDC	4	11	6	9	30
Total	4	14	6	10	34 (15.8%)
Trengganu					
NHD	0	1	1	0	2
SEDC	7	8	2	2	24
Total	7	9	3	3	26 (12.1%)
Grand Total	57 (26.5%)	85 (39.5%)	85 (39.5%)	23 (10.7%)	215 (100%)

Source: Researcher's First Stage/Quantitative Data Collection

Step 3: Data Gathering into a Roster

The gathering of information involved the collection of data from 'administrative records' at the MHLG in Kuala Lumpur and also visits to 'Housing Divisions' of all the seven state secretariats. About one and half months of the fieldwork was spent at the Ministry while almost two months was spent on visits to all the seven states. On average, about one week was spent in each of the states. The task of data gathering involved searching of files, records, progress reports and other relevant records.

The required information was gathered into a 'data collection roster'. The 'roster' is a form of "questionnaire" administered by the researcher when searching into files of selected PLCHP's files. The '*data collection roster*' contains five main sections as the following:-

Section 1: Project's background.

Section 2 : Project's preliminary preparation.

Section 3: Project's resourcing.

Section 4: Planning approval process

Section 5: Construction and completion

Section 1: Project's background

This section contained the project's name, district and state, date of project formulation, five year plan period, the category of project location, whether inside or outside local authorities' controlled areas, whether an extension of a previous project (phase of development), the number of houses targeted, the number of houses finally built, the type of houses built, and the project's intended aim.

Section 2: Information about project's preliminary preparation

This section included types of land proposed for the project, when the site was identified, whether the land report was prepared, any changes to the proposed site, the type of changes to the proposed project, justification to a particular chosen site, when the land application was made to the land office, when land was made available for the project and the land cost. It also included project estimates, feasibility studies and reasons for project cancellation.

Section 3: Project Resourcing

This section consisted of information about whether the 'revolving fund' was made available and utilised for the project, the project's original estimated cost, the date of the loan application submitted to the Ministry of Housing and Local Government, the date of loan approval by the Technical Committee on Housing Loan (TCOHL), the date and amount of the loan agreed by the Treasury, the date and amount of the agreement signed between the State and Federal Government, when loan withdrawals were made and whether any additional loan was approved by the Federal Government.

Section 4: Planning Approval Process

This section related to questions like the types of planning approval required, when planning and building approval was granted by local authorities and the date of certificate of fitness issued.

Section 5: Construction and Completion

The information in this section included when construction began and ended, amount of construction cost, total costs, when the project was handed over to the Housing Division of the State Secretariat and the date of occupation.

Step 4: Data entry into computer and checking

Data entry was first made into the Lotus 123R23 installed in "notebook computer" and then it was converted into SPSS Windows 6.0 of the desk top computer.⁽⁷⁾ Data entry into computer was entered case by case after variables and

coding had been formulated. Entering the value into each cell was time consuming. A total of 108 variables was created for 215 cases which mean 23,112 cells had to be entered with values. Therefore more than a month was spent on this task.

After data had been completely entered the next task was to carry out a test run and data checking. SPSS provided a means of data checking by the exploration method, rechecking frequencies method where the distribution of each value in the variable was printed and checked by the box plot method. Any extreme values and any suspected values were checked for their appropriateness. Mostly errors occurred due to typing errors. In addition the researcher's inside knowledge and experience in working with the programme helped to provide hunches and refined the logic of data verifications. The data presented from the administrative records were valid and accurate. They were not modified or never amended by programme administrators as attempt of trying to hide something from this researcher. After all, many of the people involved in the programme were not there any more⁽¹⁾. After rechecking and the process of going through the data about 90% of the data collected were valid and accurate. Another 10% could be due to unintentional human errors such as typing errors, wrong entries or due to difficulties reading some of the blurred photo copies and some handwriting information from the records. Since long ago the Malaysian administrative system has supported and is committed to a project reporting system which can be traced back to the Red Book reporting system introduced in 1960s (Davies, 1981). Masser praises Malaysia's SETIA reporting system as a successful project monitoring system that is due to a healthy and stable organisational climate in the administrative system (Masser, 1990; p.14). The systematic record keeping through minutes of meetings, checking and various reporting system has enabled data collection for this programme to be taken as far as 1975.

¹. The public administration in Malaysia keeps accurate records of programme as these records were subjected to auditing. Since this research studied about implementation of PLCHP in past five-year plans, many of programme administrators in-charge of these projects were not anymore worked at MHLG or State Housing Department. They had been transferred to other departments or somewhere else. Thus, this researcher believed that there was no element of hiding any information from this researcher.

Step 5: Statistical tests and data analysis

Then several statistical tests were carried out such as engaging the frequency distribution, cross tabulation, comparison of means, t-tests and analysis of variance. The aim was to analyse patterns amongst variables and to test if relationships occurred. Then, statistical tests of correlation and regression were also carried out.

Step 6: Writing of the results

The final part of this study approach is to present relevant and significant results in writing. These statistical results are presented in this thesis

SECOND STAGE: QUALITATIVE APPROACH

The second stage is the qualitative approach which aims at providing richness of data, getting stories from the perspective of people involved in the programme and adding facts to the first stage of data collection. Through this approach, detailed descriptions of programme implementation are obtained that help the researcher to understand particular problems in greater depth. It provides answers in a qualitative manner to the questions of what factors limit programme achievement.

Quantitative work implies the application of a measurement and numerical approach to the nature of the issue under scrutiny as well as the gathering and analysis of data (Bullock et al, 1992; p.85). Qualitative investigation, in contrast, is often viewed as intensive or micro perspective and relies upon case studies or evidence gleaned from individuals. Qualitative approaches always adopt the non-probability sampling strategy. For this stage the cases to be selected are not truly random and also do not provide representativeness of data to enable generalisation to the main population as in the first stage. In contrast to the first stage, the power of this stage lies on '*information rich cases*'. Information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the study. Because we are limited by constraints such as time, cost and actors who are willing to participate in the study, the gathering of a small number of cases with rich information rather than a

large number of cases with little information is a reasonable approach for this second stage.

Sampling Technique

Twenty four projects were selected for the qualitative study from the sample of 215 projects in stage one. The selection was based on *non-random and purposive sampling*. Certain criteria were set for the selection of cases. The aim was to investigate programme variations across sites, planning periods and agencies. At this stage the focus was to provide detailed descriptions of project implementation and to examine factors expediting and limiting the programme performance.

To achieve the objective of extracting a range of cases in a small sample, this researcher determined to select several projects around means and median in the quantitative data calculation and then to compare them with several cases around the first and third quartile. Extreme cases such as those cases which were too fast and too slow in the implementation process were not considered in this second stage. Extreme cases which were too slow in the whole implementation process were considered bound with too many problems whereas the fastest cases experienced very few problems in the whole implementation process. The basic idea behind this selection of cases is to highlight what was usually happening in the majority of cases. However in this process of selection cases should be included with variation among five year plans, states and implementing agencies.

The Selection of Cases

To select samples of '*about twenty cases*' from the list of 215 projects the process adopted underwent three steps as follows:-

- (1) Narrowing the projects only to three states.
- (2) Matching the projects according to the three criteria; the "*length of time*" taken to complete the project, the "*project's total cost*" based on adjusted 1990's price and "*target achievement*".
- (3) Selecting several incomplete projects.

Narrowing the choice. Only projects in three states were selected in this stage two. The states selected were Negeri Sembilan, Perak and Selangor. These states represented major projects which were assigned to the National Housing Department, the Public Works Department and the State Economic Development Corporations. As a consequence of this narrowing process, a total of 111 projects were left in the sampling frame from the total of 215 projects sampled in the first stage.

Cases Matching. The 111 projects for the three states were further re-arranged for the selection process based on the criteria as follows:-

- (1) A number of projects were selected which had *their 'length of time for completion'* tabulated around median and mean, first quartile and third quartile.
- (2) A number of projects were selected which had their *'adjusted total cost according to 1990's price'* distributed around median and mean, first quartile and third quartile.
- (3) Several cases were which achieved their target, below target and above the target.
- (4) Finally, selected cases examined and fair representation of the five year plans and implementing agencies was checked. As a result, a total of 19 projects were selected.
- (5) In addition to the above process a number of *'uncompleted projects'* were also selected.

The projects selection at this stage was not purely random but guided by projects which the researcher felt could provide rich information and in addition actors involved with the projects could be traced and were available to participate in the proposed guided interviews. Some of them had promised to participate in this interview when they were met them during the first stage quantitative data collection. As a consequence of this process, a total of twenty four projects were selected for the qualitative data collection as shown in Table 7.7. Out of a total of 24 projects planned,

only 20 projects succeeded in collecting 'an almost complete picture', while four other projects only obtained partial information.

Table 7.7:

PROJECTS SELECTED FOR THE QUALITATIVE DATA COLLECTION IN THE STAGE TWO

Project's Name	State	Plan	Agency	Performance Category	Level of Information Obtained
1. Upper Canal	Ng.Sembilan	4MP	SEDC	Uncompleted	Full
2. Lancott 2	Perak	4MP	NHD	Uncompleted	Partial
3. Riverside 3	Selangor	4MP	SEDC	Uncompleted	Full
4. Mound of Gold	Perak	4MP	NHD	Uncompleted	Partial
5. Three Mile Stone	Selangor	4MP	NHD	Uncompleted	Full
6. Bamboo River Resettlement	Selangor	4MP	SEDC	Uncompleted	Full
7. Risefield	Ng.Sembilan	4MP	SEDC	Slow Project	Full
8. Trunkville	Selangor	3MP	SEDC	Slow Project	Full
9. Gingling	Ng.Sembilan	3MP	NHD	Slow Project	Full
10. Swampy Village	Ng.Sembilan	3MP	NHD	Slow Project	Full
11. New Pheasant Garden	Selangor	4MP	NHD	Slow Project	Partial
12. Pumpkinville	Ng.Sembilan	5MP	SEDC	Average Project	Full
13. Hotville	Ng.Sembilan	3MP	SEDC	Average Project	Full
14. Lakesland Resettlement	Selangor	3MP	SEDC	Average Project	Full
15. Whiteville	Perak	4MP	NHD	Average Project	Full
16. Barkings	Perak	4MP	NHD	Average Project	Full
17. Coral Cape Housing	Selangor	4MP	NHD	Average Project	Full
18. Stony River Housing	Selangor	4MP	SEDC	Average Project	Full
19. Golden Hope	Selangor	4MP	SEDC	Average Project	Partial
20. Ficuswoods Resettlement	Selangor	4MP	SEDC	Average Project	Full
21. Lumber Junction	Selangor	4MP	PWD	Fast Project	Full
22. Knee Lie	Ng.Sembilan	3MP	NHD	Fast Project	Full
23. Manor	Perak	4MP	NHD	Fast Project	Full
24. Long Sand	Ng.Sembilan	4MP	SEDC	Fast Project	Full

Source: Researcher's Qualitative Data Collection 1994

Interview Guide Approach

The key information gathered at this stage was done by carrying out in-depth guided interviews to extract information based on the perspective from actor's point of view. The *interview guide approach* was chosen where topics and issues to be covered were specified in advance, in outline form; and the interviewer decides the sequence and wording of questions in the course of the interview. The outline increases the comprehensiveness of the data and makes collection more systematic for each respondent. Logical gaps in data can be anticipated and closed. Interviews remain fairly conversational. The weaknesses of this approach is that important and salient topics may be inadvertently omitted. Interviewer flexibility in sequencing and wording questions can result in substantially different meanings and responses by respondents, thus reducing the comparability of responses. However, the interviews in this study were to seek explanation of different projects from different respondents. Interviews were involved mainly with programme administrators at the federal, state and implementing agencies for the selected 'case studies'. A set of *guided interview questionnaires* were used as a guidelines for conduct the interview and asking questions. This *guided interview* was carried out to elicit the respondents experiences and opinions related to the implementation of PLCHP. The aim of these in-depth interviews is to verify certain facts and to capture information which was not available or was left out from the programme records.

This researcher rejected *the informal conversation approach* because of its impromptu nature where there is no predetermination of question topics or wording. The approach would be more suitable for the participation observation approach.

In addition this researcher also felt that another approach of *standardised open ended interview* with the exact wording and sequence of questions determined in advanced was also not appropriate approach for this research. This approach asks all interviewees the same basic questions in the same order. Although increasing comparability of responses (data are complete for each topic addressed in each interview) little flexibility occurs in relating the interview to particular individuals and circumstances. Standardised wording of questions may constrain and limit naturalness

and relevancy of questions to different projects, according to plans, states, agency and completion status.

Respondents

During stage two data collection, the researcher identified about 30 respondents, but it was expected that not all would be available for interview during the short trip back to Malaysia. However, twenty five people did participate in the interview sessions. In order to achieve anonymity the respondents preferred to be known by 'nick names'. The list of respondents who participated in the interviews appears in Table 7.8 this thesis.

Second Stage: Fieldwork

As a strategy to overcome any short comings during the fieldwork, the 24 projects had been arranged in order of priority. These possible short comings were: *time constraints, unavailability of respondents, inability of respondents to recall detailed projects narration and other unforeseen circumstances.* Information at this stage was gathered through guided interviews with those involved in the programme implementation. Also searching into project documents was done to verify some of the information given, especially related to dates and figures. (Respondents also sometimes requested that some of the facts they stated be cross-checked with project documents.)

This second stage of fieldwork was carried out in a period of about two months in November and December 1994. It was accomplished according to the following steps:-

Tracing the respondents: the identified respondents were located. In addition, I also checked project documents were checked (files at the Ministry of Housing and Local Government) to find out who was involved in the selected projects. Tracing

Table 7.8:

LIST OF RESPONDENTS WHO PARTICIPATED IN THE GUIDED INTERVIEW

Name	Connection to the Programme	Year/ Years Involved	No. Of Interviews	Notes
1. SHEIK	SHD's technician	1982-1994	1	Very experienced technician involved in many projects
2. AZIZ-1	SHD's technician	1992-1994	1	Liaison with the implementing agency
3. RAS	MHLG's officer	1988-1994	1	Programme co-ordinator
4. AZIZ-2	MHLG's officer	1978-1981	1	Programme co-ordinator
5. HAMI	MHLG's officer	1994	1	Set policy direction for the Ministry
6. ZAKY	MHLG's officer	1988-1994	3	Programme co-ordinator
7. HALO	MHLG's officer	1982-1992	2	Programme co-ordinator and set policy guidelines for federal agencies.
8. RAWI	State Housing Division	1986-1994	1	In-charge of housing in two states.
9. LAN	National Housing Department	1989-1994	3	Design and Planning approvals.
10. ROHS	State Housing Division	1981 to 1986	1	Programme Administrator
11. NAFIS	State Economic Planning Unit.	1986-1994	1	Worked in two states' EPU
12. SHERIF	State Housing Division	1978-1980	1	Programme Administrator
13. RI	National Housing Department	1994	3	Involved in the programme at district level 1976-1989
14. VALUE	Director General of the Ministry.	1984-1989	1	Involved in the policy formulation and now adviser to housing development.
15. KAS	State Housing Division	1981-1983, 1993-1994	2	Programme Administrator
16. HAIRY	State Housing Division	1980-1984	2	Programme Administrator
17. RAFT	State Housing Division	1984-1987	1	Programme Administrator
18. HAZE	State Housing Division	1980-1985	1	Programme Administrator
19. KANIS	State Economic Development Corporation	1974-1994	2	Programme Implementer
20. HARDY	National Housing Department	1974-1994	1	Programme Administrator
21. GEH	Public Works Department,	1989-1994	1	Programme Implementer on the ground
22. YING	Public Works Department,	1980-1994	1	Programme implementer on the ground
23. BAKER	State Housing Division	1975-1984	1	Programme administrator and co-ordinator at district level
24. CHALI	State Housing Division	1982-1995	2	Programme administrator and co-ordinator at district level
25. YONG	National Housing Department	1989-1995	1	Structural design for projects

respondents took about a week because it involved searching into 'service records' to find where they were working: searching through telephone directories; making telephone calls; and making follow-up calls when respondents were not available.

Making appointments for interviews: once respondents had been located then the next stage was to make telephone calls and explain the study. These telephone conversations helped to refresh their memories about certain projects and the programme as a whole. Appointments for interviews were then fixed.

Conducting interviews: at the beginning of the interview it was explained once again about the aim of the study, the purpose of the interview, the confidentiality of information provided and the opportunity to contribute towards improving the programme. In most cases interviews would last for about two hours; however in several cases they were longer, where two interview sessions were carried out. While conducting the interview, the researcher has to ensure all the information required was covered by the interview. This was done by 'ticking' the number on the interview guide. All interview sessions with respondents were recorded using a tape recorder to enable a spontaneous discussion. This researcher dropped the idea of recording interviews using the video recorder, due to resentment feel by many of the respondents.

Making notes: short notes on interviews were made immediately after the interview session. These short notes contained the main theme, issues and general summary of the interview. They were written by hand and usually prepared in the evening of the same day. The taped conversations were also used to examine what was covered by the interviews and to assess if additional interviews were required. Similarly they were used to plan additional questions or modifications of questions for subsequent respondents. This strategy helped in many ways such as: (a) to assess whether the interview was adequately covered; (b) to improve interview session with subsequent respondents; and (c) to compare certain perspectives or facts with the next respondents.

Conducting second round interviews: second round interviews were carried out when additional information was required, clarification about certain statements or

issues and also if requested by respondents because they believed they would contribute and reveal better narration than in the first one.

Conducting free form discussions: several free form discussions in informal manner were also carried out with several respondents especially those who are involved with current projects. On comparison there was not much difference in terms of problems highlighted by actors of past projects and actors of current projects.

Transcribing interviews: the final stage was transcribing all the interviews and transferring important notes into the computer. This was one of the difficult jobs due to several constraints such as:-

(1) ***Poor speech clarity:*** sometimes what was being said could not be understood clearly. Probably what was said and meant was clearly understood during the actual interview session because the researcher could hear and see lip movement clearly, also certain narration was aided with facial expression and gestures. Another possible cause could be the quality of tapes, recorder or condition of batteries used. The best solution found to this problem was to replay using a good quality tape player with equaliser or to use a walkman stereo.

(2) ***Translating of interviews into English:*** some of the interviews were conducted in the Malay language and some interviews combined both English and Malay. It was difficult to transform interview conversations into precise and accurate written English. If 100% verbatim was used, the real intention would not be able to be understood.

(3) ***Transcribing:*** transcribing from recorded interview into word processing is a slow but worthwhile process.

STUDY CONSTRAINTS AND LIMITATIONS

Section three of this chapter explains about problems and constraints faced during the data collection of both the quantitative and the qualitative approach. It is also mentions the limitations of this study and the two approaches adopted.

Factors assisting data collection

As explained earlier, the first stage data collection adopted the quantitative approach where searching through programme records was done. Before the work of actual data gathering began this researcher had approached the MHLG about the proposal to carry out a study and an access requested into the programme's records which are available at the Ministry. The same approach was also used to all the seven state governments selected in the study. On arrival in Malaysia discussions were also held with several senior officials of the Ministry about the proposed research project. The Ministry supported this research and in addition they promised to give the necessary co-operation to the study. Access to programme records (in forms of project files, progress reports, etc.) was granted. The Ministry also informed state governments about this and urged them of the necessary help and co-operation for this study. A room and facilities were provided at the Ministry of Housing and Local Government.

Several factors had assisted data collection especially on gaining access to records and information of the projects kept by several public agencies. Personal experience and knowledge on Malaysian's administrative system and some personal contacts helped to gain access to this information. Some of the points are explained as follows:-

Know how to gain access to bureaucracy. Knowledge and a working experience of various levels of Malaysian public services helped to gain access to people and information available at many government departments.

Understand how government operates. Data collection can be expedited if one knows how government operates. Most records are kept in files, progress reports, briefing notes, working paper and minute of meetings. The progress reports of 'five year' development projects are usually co-ordinated through several monthly or quarterly meetings. Reports on projects' progress and problems are always discussed in those meetings. Besides, relevant information is also available from:

- (1) Annual Budget Reports; in many forms (budget performa submitted to Treasury, Budget Reports for Parliament or State Legislative Assembly)
- (2) Annual Report
- (3) Malaysia Year Book
- (4) Economic Report
- (5) Bank Negara Report
- (6) Statistics Quarterly and Annual Reports
- (7) Housing Bulletin
- (8) Government and Administrative Circulars

These reports are usually available at the agencies' library or kept somewhere in the book shelves.

Know what you want. Make the projects list ready with files' reference number and cross reference number. Have the list of projects and file references ready. Files' reference number available through searching of files at MHLG by referring to the correspondence enclosed in the files, copy of agreements and payment vouchers which always cited the relevant projects' files.

Personal contact. Two years working experience in charge of the programme assisted gaining contact with people in charge of the programme at federal and state level. Some of them are *colleagues and acquaintances*. The researcher made an effort to be introduced by someone if I did not know them.

Make efforts to see important figures in the State or implementing agencies. Courteously call to Chief Ministers, State Secretaries, members of Executive Council, head of state economic planning units were made during the fieldwork. As the result,

departmental records and related information were made accessible once people understood the purpose of this study.

Quantitative Data Gathering Constraints

People are less interested in past records/projects. Officials and personnel at the Ministry, State Secretariats and implementing agencies were focused and well versed about contemporary projects (the Sixth Malaysia Plan) while the researcher was looking back into the past; the projects from 1976 to 1990. Therefore discussions with personnel were limited to current projects: the 5MP's projects carried over to 6MP. Past projects' files are dormant and some are kept in storerooms, rather than in filing cabinets. Searching was sometimes difficult, dusty, and some of the photocopied documents were difficult to read. Visits to some of the states were made several times because the personnel still could not locate the selected project files. This caused unanticipated delays in the timetable set earlier for the fieldwork.

Difficulty in searching records. Records searching at the State Secretariats' Housing Division depended on the assistance provided by clerks and technicians. Each state has its own system, for example in Perak the researcher dealt only with the chief clerk for project files. But, in Johor the researcher had to deal with several personnel to obtain information for one project; because the record for one project were kept in several files according to sub-headings like physical progress, permission application, finance, etc. Delays in data collection occurred because personnel went for fieldwork or were on leave. At the National Housing Department we had almost emptied the files' store just to search for one of the earliest projects' progress report in 1980's.

Most of programme managers in charge of projects were not serving in the housing division anymore. However since most of them are still working with the government, the researcher managed to trace and discuss with some of them, on some of the projects. They had also promised to participate in the in-depth interviews to be carried out in the second stage of fieldwork.

Valid and Reliable Data

Some of these records were sometimes inaccurate and conflicting that caused time consuming in verifying them to obtain an accurate value. Comparison of several records from various sources has to be made to reach what was believed to be an appropriate value. For example some of the project names were almost similar. Thus caused a mix up not only to the researcher, but also to personnel who prepared and managed the records in the past

Sampling frame and samples

Minor changes to the sampling frame and projects' samples due to the changes of project status. Some of the information on actual projects' completion is different from the sampling frame when prepared at the earlier stage of fieldwork.

This study focuses on projects began in 3MP, 4MP and 5MP in Malaysia. It does not include projects earlier 'five year plan' because records on these projects could be difficult to obtain. This study also does not include projects formulated in the Sixth Malaysia Plan (1991-95) because when this research is undertaken the plan still does not end.

QUALITATIVE APPROACH

Since this research is dealing with past projects which go back as far as 1975, the task was to trace the programme administrators and other actors involved in the programme is one of the difficulty faced by this researcher. In addition the next difficulty is to overcome the problem of how to verify the validity and accuracy of statement given by respondents because they might forgot the true story of the project poses to them. To overcome the first difficulty, the help of the Public Service Department in tracing the respondent was being sought. For the second difficulty in dealing with past projects, especially for the 3MP and 4MP's projects, respondents were sent with interview guide, to help them to prepare in advance on the topic and

recall their memories about the selected projects. Telephone conversation about the project before the interview also helped to refresh their memories about the project.

Other constraints and problems faced by this researcher during the second stage data collection are as follows:-

Unforeseen circumstances. Monsoon season and school holidays during November affected my fieldwork. Heavy downpour occurred almost every afternoon, therefore interviews preferred to be conducted in the morning session only. To overcome the heavy down pour problem, when an interview was scheduled in the afternoon, I have to arrive in the morning and waited at the respondent's office until afternoon.⁽⁸⁾

Optimising use of time. Interview sessions were unable to carry out every day because many people were not available. They went on leave or holidays in conjunction with the school holidays in November.

Time constraints. Given longer time I would have be able to conduct more interviews with more respondents and to complete all the 24 cases selected earlier.

Difficulty to reach respondents. Some of respondents were living away from Kuala Lumpur area. To meet them requires more time and money.

SUMMARY

In this chapter this writer highlighted the research methodology adopted for this study by the combination of both quantitative and qualitative approach in answering the research problem. Data collection was carried out in two stages. The first stage was through quantitative approach by searching data from the programme's administrative records. The samples of 215 projects were selected out of a sampling frame of 624 public low cost housing projects in three five year plans, in seven states which implemented by three implementing agencies. Then, the second stage was

carried out through qualitative approach focusing on smaller number of projects which were narrowed down through a selection process of “non-random and purposive sampling”. Guided interviews were carried out with 25 actors involved in these projects formulated in three states in West Malaysia and three five year plans between 1976 to 1990.

In the following Chapter Eight, this writer shall discuss about the general survey of the public low cost housing projects formulated in three five year plans between 1976 to 1990 based on data collected by the quantitative approach. Then in Chapter Nine there will be a report of data analysis of the qualitative approach. The testing of hypotheses will be presented in Chapter Ten.

¹Notes: Administrative records are collections of documents containing mainly factual information compiled in a variety of ways and used by organizations to record the development of and implementation decisions and activities that are central to their functions.(Catherine Hakim, Research Design, Routledge, London, 1987 p.36) .

²Hammersley (1992) rejects the notion that the differences between these two methods by the predominance of tables and statistical analysis on one hand, and verbal presentation on the other hand. Hammersley asserts that the contrast between numbers and words are unimportant, but what the two methods attempt are the notion of precision. He argues that precision does not necessarily means number. In addition, he posits that accuracy is more significant. Further he claims that "...our decisions about what level of precision is appropriate in relation to any particular claim should depend on the nature of what we are trying to describe, on the likely accuracy of our descriptions, on our purposes, and on the resources available to us; not on ideological commitment to one methodological paradigm or another." (Hammersley , 1992; p.43) See Hammersley (1992) 'Deconstructing the qualitative-quantitative divide' in Brannen, (1992), Mixing Methods: qualitative and quantitative research, Avebury, Aldershot, England.

³This researcher is confident that data obtained from the administrative record is 95% accurate. This is because the Malaysian bureaucracy is well developed where personnel has undergone variety of training and courses to enhance their management and record keeping. This PLCHP engaged periodical reporting system (monthly and quarterly) to various higher authorities whether at the district, state or federal level. Maintenance of an accurate record keeping is a must under the provision of office procedures, circulars, manuals and to a certain extent of a legal requirement. These records are also subjected to auditing by the Auditor General Department, where inappropriate of funds or any action by anyone who is responsible which is not in accordance with government procedures or legal requirements, can be subjected to surcharge or disciplinary action. Based on these premises, this researcher believed that the information provided from these records were reliable, accurate and a valid source.

⁴"Sampling frames are list used to draw a random sample from a population and should therefore theoretically contain every member that population without duplication." (Pickett, 1974; p.115)

⁵Some of the information on states in Malaysia is presented in the following table:-

Table 7.9: Selected Characteristics of States in Malaysia

Region/State	Urbanisation Ratio ¹ (%)	Per Capita Gross Domestic Product Ratio ² (%)	Per Capita Income ³ (%)	Population Growth Rate ⁴	Household Income Ratio to National Average
<u>NORTHERN</u>					
Perak	33.6	0.76	77	0.68	0.85
Kedah	16.0	0.59	63	1.74	0.69
Pulau Pinang	60.4	1.12	109	1.52	1.10
Perlis	11.2	0.68	65	2.18	0.68
<u>CENTRAL</u>					
Selangor	62.8	1.49	139	4.30	1.43
Melaka	23.1	0.82	80	1.10	0.95
N.Sembilan	42.1	0.87	90	2.05	0.93

Wilayah	100.0	1.73	174	1.99	1.68
EASTERN					
Pahang	24.6	0.75	76	2.75	0.87
Kelantan	32.2	0.40	40	2.90	0.58
Trengganu	51.1	1.62	154	3.49	0.72
SOUTHERN					
Johor	43.7	0.91	88	2.47	0.97
SABAH	25.6	1.02	106	5.69	1.08
SARAWAK	20.9	0.88	92	2.62	0.96

Notes:

1. Urban to rural ratio in 1988.
 2. Per capita gross domestic product in 1990; the ratio to the national average
 3. Per capita income of percentage of the national average in 1988. The average per capita national income = M\$3857.5
 4. Based on the annual population growth rate between 1980 to 1991.
- ⁶.Disproportionate Stratified Sampling: for the population and composition of total group to some significant characteristics is known before the sample is selected. However the size of sample is not proportionate to size of sampling unit but is dictated by analytical considerations or convenience. Advantages includes assures representativeness, decreased the chance of failing to include members of population because of classification process, and characteristics of each stratum can be estimated. In addition more efficient for comparison of strata . Disadvantages includes required accurate information on proportion of population in each stratum otherwise increases error, also costly to prepare stratified lists. Less efficient to determine population characteristics; i.e. more variability for same sample. (Miller, 1991; p.62)
- ⁷ 'Notebook computer' was used because part of data entry made during the fieldwork in Malaysia. The notebook's limited memory and hard disk capacity required data to be converted into a more powerful desk top computer which can accommodate for SPSS Window 6.0.
- ⁸ I was several times soaked to the bone and chilled during the second stage fieldwork because was caught in the heavy down pour. I traveled on motorbike because traveling by a car in the afternoon increased the risk of getting caught in city's heavy traffic congestion and flash flood! This was also as a mean to cut traveling costs.

Chapter Eight

QUANTITATIVE DATA ANALYSIS

Introduction

This chapter presents an analysis of survey results for the selected 215 public low cost housing projects formulated in seven states during the three five-year development plans between 1976 and 1990. The aim is to provide an overview of the public low cost housing projects selected for this study

First, the chapter brief by describes all key information on all 624 projects included in the sampling frame for the study. Second, it analyses for the 215 samples projects. The analysis focuses on the key characteristics of projects: their distribution amongst five-year plans, states, implementing agencies and their completion status. Then there is an analysis of how long is took to complete each stage of the implementation process. Third, there is a discussion about project resourcing, which includes fund allocation, the amount of loan provided, costs per dwelling and costs adjusted to 1990's prices. Finally, there is an analysis of the projects' intended number of houses. The survey aims is to analyse variations in time taken and target achieved according to plans, states and implementing agencies and to identify where the delays occurred along the stages of the project implementation process.

Project Distributions

It was estimated that about 1,000 public low cost housing projects were formulated in Malaysia during the three five-year plans between 1976 and 1990. Out of that estimate, 624 projects were formulated during that period in seven states of Peninsular Malaysia, as shown in Table 8.1 below. The distribution of projects shows that: 233 projects (37%) were formulated for the Third Malaysia Plan (3MP), 363 projects (58%) for the Fourth Malaysia Plan (4MP), and only 28 projects (5%) for the Fifth Malaysia Plan (5MP). Although there were 28 projects formulated for the 5MP, the total number of on going projects in the hands of state governments was larger

than that, because it included 157 carried-over projects from the previous two five-year plans (or 16,293 units as shown in Table 5.10, Chapter 5).

Table 8.1 also shows the tabulation of projects in seven states during the three five-year plans. Selangor has the largest number of projects (139), then followed by Perak (110 projects) and Pahang (109 projects) while Pulau Pinang has the least number with only 34 projects. Comparing the plans, we can find that all states have the highest number of projects during the 4MP, while having a smaller number of projects for the 5MP.

Table 8.1:

NUMBER OF PUBLIC LOW COST HOUSING PROJECTS BY STATE
BETWEEN 1976 AND 1990

State	Third Malaysia Plan	Fourth Malaysia Plan	Fifth Malaysia Plan	Total	Percentage
JOHOR	20	49	2	71	11.4%
NEGERI SEMBILAN	33	64	2	99	15.9%
SELANGOR	65	74	0	139	22.3%
PERAK	41	68	1	110	17.6%
PULAU PINANG	8	22	4	34	5.4%
PAHANG	48	52	9	109	17.5%
TRENGGANU	18	34	10	62	9.9%
GRAND TOTAL	233	363	28	624	100%
Percentage	37.3%	58.2%	4.5%	100%	

Source: Researcher's First Stage/Quantitative Data Collection

The distribution of 624 projects by implementing agencies in the three five-year plans appears in Table 8.2. The National Housing Department (NHD) has 192 projects, comprising 62 projects for 3MP, 127 projects for 4MP and 3 projects for 5MP. The State Economic Development Corporations (SEDC) had 345 projects consisting of 137 projects for the 3MP, 187 projects for the 4MP and 21 projects for the 5MP. The Public Works Department (PWD) had a total of 87 projects, of which 34 projects were in 3MP, 49 projects were in 4MP and only 4 formulated projects in 5MP. The percentage of distribution for the three five-year plans for the three agencies is as follows: NHD's share is 31%, SEDC's share is 55% and PWD's share is 14%.

Table 8.2:

**DISTRIBUTION OF PROJECTS ACCORDING TO IMPLEMENTING AGENCIES
BETWEEN 1976 AND 1990**

Plan/ Agency	NHD	SEDC	PWD	Total
Third Malaysia Plan	62	137	34	233
Fourth Malaysia Plan	127	187	49	363
Fifth Malaysia Plan	3	21	4	28
Total	192	345	87	624
Percent	30.8%	55.3%	13.9%	100%

Source: Researcher's First Stage/Quantitative Data Collection

Table 8.3 below provides a tabulation of projects according to their status of completion for the three five-year plans. There are four categories of project completion status as follows:-

- (1) completed within the plan,
- (2) completed in the next plan,
- (3) completed in next two plans, and
- (4) uncompleted, cancelled or still under construction.

As shown in Table 8.3, out of the total 624 projects, 172 projects (28%) were completed within the same plan, 265 projects (42%) were completed in the next plan, 35 projects (6%) were completed in the next two plans and 152 projects (24%) were categorised as uncompleted, cancelled or still under construction.⁽¹⁾ This table indicates that almost half (48%) of the projects were completed outside the targeted plan and almost one quarter (24%) of projects were uncompleted. The level of progress for uncompleted projects varied. Some of them had only reached the early stage of just being formulated and allocated funding, and some had reached the stage of loans being approved by the Treasury and sites being acquired, some had even reached the stage of preliminary building construction. Reasons for cancellation varied from: indecisiveness about the project; indefinite postponement, reconsideration as non priority projects ; re-routing of funds for higher priority projects; poor response from buyers; poor technical and financial viability, and political reasons as well.⁽²⁾

Table 8.3:
THE COMPLETION STATUS OF PUBLIC LOW COST HOUSING PROJECTS
FORMULATED BETWEEN 1976 AND 1990

Plan/ Status	Completed Within the Same Plan	Completed in the Next Plan	Completed in the Next Two Plans	Incomplete	Total
3MP	78 (33.5%)	129 (55.4%)	12 (5.1%)	14 (6.0%)	233
4MP	91 (25.1%)	122 (33.6%)	23 (6.3%)	127 (35%)	363
5MP	3 (10.7%)	14 (50%)	0 (0%)	11 (39.3%)	28
Total	172	265	35	152	624
	27.6%	42.4%	5.6%	24.4%	100%

Source: Researcher's First Stage/Quantitative Data Collection

Table 8.3 also implies that only about one quarter of the projects formulated at the beginning of each five-year plan would achieve completion by the end of the same five-year plan, while another half required more than five-years to achieve completion. Moreover a further analysis of projects completed within the plan period shows that their percentages are decreasing from 34% in the 3MP to 11% in the 5MP. An explanation of this could be that during the 5MP a higher priority was given to completing the 157 projects continuing from the previous 3MP and 4MP. The number of uncompleted projects is high. The percentage of incomplete and projects under construction shows an increasing trend from merely 6% in 3MP to 39% in 5MP. However, based on the actual number of projects, the 4MP has the largest number of incomplete projects (127 projects):

Information on project completion status according to the three implementing agencies is further provided by Table 8.4 below. For projects completed *within the same plan*; NHD has 32 out of 192 projects or 17%, whereas SEDC has 106 out of 345 projects or 31%, and PWD has 34 out of 87 projects or 39%. For projects *completed in the next plan*; NHD has 103 projects or 54%, whereas SEDC has 128 projects or 37% and PWD has 34 projects or 39%. Then for projects *completed in the next two plans* the proportion of each agency's total projects is quite small: 5%, 7% and 1% for the NHD, SEDC and PWD respectively. The range for the three agencies in terms of percentage of *incomplete or under construction* projects is not large. The percentages are 21%, 25% and 26% for each agency, PWD, NHD and SEDC

respectively. However, the actual number of projects differs with PWD's 18 projects, NHD's 47 projects and SEDC's 87 projects. Amongst the three agencies, NHD has the smallest proportion of projects completed within the same plan but it has largest proportion of projects completed in the next plan and next two plans.

Table 8.4:
COMPLETION STATUS OF PUBLIC LOW COST HOUSING PROJECTS BY
IMPLEMENTING AGENCIES 1976 AND 1990

Status / Agency	Completed Within Plan	Completed in Next Plan	Completed in Next Two Plans	Incomplete	Total (Col.%)	Percent for Row
NHD	32 (16.7%)	103 (53.6%)	10 (5.2%)	47 (24.5%)	192 (100%)	192 (30.8%)
SEDC	106 (30.7%)	128 (37.1%)	24 (7%)	87 (25.2%)	345 (100%)	345 (55.3%)
PWD	34 (39%)	34 (39%)	1 (1.3%)	18 (20.7%)	87 (100%)	87 (13.9%)
Total	172	265	35	152	624	624
	27.6%	42.5%	5.6%	24.4%	100%	100%

Source: Researcher's First Stage/Quantitative Data Collection

The distribution of 624 projects according to states and status of completion are tabulated in Table 8.5 below. Two states, Negeri Sembilan and Trengganu have a larger number of their completed projects which fall into the category of *within the same plan*. While other states have a larger number of their projects *completed in the next five-year plan*. Selangor has the largest actual number of projects *completed within the same five-year plan*: 47 out of 139 of its total projects. However based on percentages Negeri Sembilan is ahead of other states with 43% of its projects (43 out of 99 total projects) completed within the same plan. Trengganu was not far behind Negeri Sembilan with 42% of its projects (26 out of total 62 projects) completed within the same plan. Pahang has the largest number of uncompleted projects among all states, 31 out of 109 projects (28%) fell into the this category. Hence table 8.5 implies a variable performance among states in terms of their apparent capability of completing projects.

Table 8.5:

PROJECTS COMPLETION BY STATUS AND STATES

Status/ State	Completed Within the Same Plan	Completed in the Next Plan	Completed in the Next Two Plans	Uncompleted or Still Under Construction	Total
Johor	12	40	4	15	71
N.Sembilan	43	31	1	24	99
Selangor	47	60	6	26	139
Perak	20	56	5	29	110
P. Pinang	11	16		7	34
Pahang	13	49	16	31	109
Trengganu	26	13	3	20	62
Total	172	265	35	152	624
<i>Percentage</i>	<i>27.6%</i>	<i>42.5%</i>	<i>5.6%</i>	<i>24.7%</i>	<i>100%</i>

Source: Researcher's First Stage/Quantitative Data Collection

The distribution of 624 projects according to the agencies engaged by the states to implement their public low cost housing projects are tabulated in Table 8.6 below. This table shows that state governments utilised mainly the service from one type of agency for most of their projects with the only exception of Selangor. For example, Pulau Pinang only engaged PWD, Johor and Perak mainly used the service of NHD, whereas Negeri Sembilan, Pahang and Trengganu mainly engaged their own SEDCs. Only Selangor used the larger proportion of service from the three agencies. More than half of all total public low-cost housing projects (55%) utilised the services of State Economic Development Corporations despite the fact that they charged a service fee to state governments. The service fee was about 7% of the total project cost. In contrast, only 31% of the projects were assigned to the NHD, although this agency provides free technical and manpower services to state governments.

Table 8.6:

**DISTRIBUTION OF PROJECTS ACCORDING TO STATES AND
IMPLEMENTING AGENCIES**

Status/ State	NHD	SEDC	PWD	Total
Johor	68	2	1	71
N.Sembilan	3	93	3	99
Selangor	10	82	47	139
Perak	105	3	2	110
P. Pinang	0	0	34	34
Pahang	4	105	0	109
Trengganu	2	60	0	62
Total	192	345	87	624
<i>Percentage</i>	<i>30.8%</i>	<i>55.3%</i>	<i>13.9%</i>	<i>100%</i>

Source: Researcher's First Stage/Quantitative Data Collection

The status of completion for the 624 projects according to states and agencies appears in Table 8.7 below. For each of state we can make comparison about the number of projects and their completion status by the agencies which was engaged by the state to implement their projects. Information in this table is an extension of the previous Table 8.5 and 8.6.

Summary on Project Distribution

A number of observations can be made. First, performance amongst states and implementing agencies and between plans varied. Larger numbers of projects (58%) were formulated for the 4MP and fewer projects (5%) for 5MP. Second, almost 50% of projects were completed outside the intended plan period and almost 25% were incomplete. This verifies that the shortfall in programme target was because a large number of projects were not completed within the intended five-year plan. For uncompleted projects, 4MP has the largest actual number whereas 5MP has the largest percentage. Third, a smaller number of projects was given to the NHD than other agencies although NHD was formed to assist the states in implementing housing construction for this programme. More projects utilised the service of SEDCs (55%) than the NHD (31%) or the PWD (14%). Fourth, the performance between the agencies was also varied where SEDCs had a larger number of projects (106 projects) completed within the same plan than NHD (32 projects) or PWD (34 projects). Finally,

many states were inclined to use the services of one type of implementing agency, with the exception to Selangor.

Table 8.7:

PROJECTS COMPLETION BY STATUS AND STATES

Status/ State	Completed Within the Same Plan	Completed in the Next Plan	Completed in the Next Two Plans	Uncompleted or Still Under Construction	Total	
Johor	<i>NHD</i>	12	38	3	15	68
	<i>SEDC</i>	-	2	-	-	2
	<i>PWD</i>	-	-	1	-	1
Sub-total	12	40	4	15	71	
N.Sembilan		-	3	-	-	3
	<i>NHD</i>	43	27	1	22	93
	<i>SEDC</i>	-	1	-	2	3
	<i>PWD</i>					
Sub-total	43	31	1	24	99	
Selangor	<i>NHD</i>	3	4	1	2	10
	<i>SEDC</i>	22	40	5	15	82
	<i>PWD</i>	22	16	-	9	47
Sub-total	47	60	6	26	139	
Perak		17	54	5	29	105
	<i>NHD</i>	2	1	-	-	3
	<i>SEDC</i>	1	1	-	-	2
	<i>PWD</i>					
Sub-total	20	56	5	29	110	
P.Pinang	<i>PWD</i>	11	16	-	7	34
Sub-total	11	16	0	7	34	
Pahang	<i>NHD</i>	-	3	-	1	4
	<i>SEDC</i>	13	46	16	30	105
Sub-total	13	49	16	31	109	
Trengganu	<i>NHD</i>	-	1	1	-	2
	<i>SEDC</i>	26	12	2	20	60
Sub-total	26	13	3	20	62	
Total		172	265	35	152	624
	<i>NHD</i>	32	103	10	47	192
	<i>SEDC</i>	106	128	24	87	345
	<i>PWD</i>	34	34	1	18	87

Source: Researcher's First Stage/Quantitative Data Collection

GENERAL BACKGROUND

This section focuses on an overview of the general pattern of the low cost housing projects. The data highlighted here is based on the sample of 215 projects collected through disproportionate sampling, as shown in the Table 8.8.

Table 8.8:

DISTRIBUTION OF PUBLIC LOW COST HOUSING PROJECTS SELECTED AS SAMPLES BY STATES AND FIVE-YEAR PLANS.

State	Third Malaysia Plan	Fourth Malaysia Plan	Fifth Malaysia Plan	Total	Percentage
JOHOR	10	12	2	24	11.2%
NEGERI SEMBILAN	14	14	2	30	15.9%
SELANGOR	19	30	0	49	22.8%
PERAK	15	17	1	33	15.3%
PULAU PINANG	6	9	4	19	8.8%
PAHANG	18	12	4	34	15.8%
TRENGGANU	10	11	5	26	9.9%
GRAND TOTAL	92	105	18	215	100%
<i>Percentage</i>	<i>42.8%</i>	<i>48.8%</i>	<i>8.4%</i>		<i>100%</i>

Source: Researcher's First Stage/Quantitative Data Collection

Aim

The main aim of public low cost houses is to provide housing for low income groups. There were five categories of this aims, as shown in Table 8.9. A large majority of projects (80%) aimed to provide housing for a variety of lower income groups. These groups were defined by monthly household income as set by the MHLG and state governments from time to time. Only a small number of projects aimed specifically at urban and rural resettlement, fishermen resettlement, housing for factory workers in the newly developed industrial areas and also a combination of several purposes. Three primary sources were used to verify the aims of housing projects: the working papers for project proposals; minutes of progress meetings; and, quarterly reports submitted to the MHLG.

Table 8.9:
AIMS OF PUBLIC LOW COSTS HOUSING PROJECTS CONSTRUCTION
BETWEEN 1976 AND 1990

Project's Aim	3MP	4MP	5MP	Total (Percent)
Housing for Low Income Groups	70	86	16	172 (80%)
Resettlement Programme	7	6	0	13 (6%)
Housing for Factory Workers	3	2	0	5 (2.3%)
Resettlement for Fishermen	3	2	2	7 (3.3%)
Combination of Several Aims	9	9	0	18 (8.4%)
Total	92 (42.8%)	105 (48.8%)	18 (8.4%)	215 (100%)

Source: Researcher's First Stage/Quantitative Data Collection

Type of Houses

Single storey terrace houses were the common type (65%) of dwelling built for this programme, followed by single wooden houses and medium rise flats, 13% respectively. Other types of houses comprised only a very small proportion. The distribution of types of houses according to the three five-year plans appears in Table 8.10.

Single storey houses are houses with an area of approximately 700 square feet on 1,000 square feet of land. These houses usually have concrete floors, light reinforced concrete frames with brickwork or blockwork in-fill for walls, timber roof structures and asbestos-cement corrugated roof sheeting. Double storey terrace houses have an additional upper floor, which is usually made of timber. (See Plate 8.1)

The medium rise flats typically have four or five storey structures. These flats have two bedrooms with an area of 400 to 500 square feet. They are made of reinforced concrete floors and structural frame, timber roof structure and corrugated asbestos-cement sheeting. The walls are usually bricks or concrete blocks. The high rise flats are usually found in major urban areas such as Kuala Lumpur, Penang, Ipoh and Johor Baharu where urban land is scarce and expensive. ~~They consist of between~~

and Johor Baharu where urban land is scarce and expensive. They consist of between 16 and 17 storeys with about 250 houses per block. The construction is similar to medium rise flats. (See Photograph 8.3 and 8.4).

Single wooden houses and semi-detached wooden houses are usually built in areas where a larger tract of land is available and the land cost is not expensive. The floors, walls and roof structures of these houses are made of timber with corrugated asbestos-cement roofing. (See Photograph 8.5)

Table 8.10:

**TYPES OF HOUSING DESIGN FOR PUBLIC LOW COSTS HOUSING
PROJECTS BETWEEN 1976 AND 1990**

Type of Houses \ Plans	3MP	4MP	5MP	Total (Percent)
Single and Double Storey Terrace	55	80	8	143 (66.5%)
Semi-detached and Wooden Houses	13	10	6	29 (13.5%)
Medium and High Rise Flats	16	14	4	34 (15.8%)
Mixed type	8	1	0	9 (4.2%)
Total	92 (42.8%)	105 (48.8%)	18 (8.4%)	215 (100%)

Source: Researcher's First Stage/Quantitative Data Collection



Photograph 8.1: Single Storey Public Low Cost House



Photograph 8.2: Single Storey Public Low Cost Houses



Photograph 8.3: Medium Rise Public Low Cost Houses



Photograph 8.4: High Rise Public Low Cost Houses



Photograph 8.5: Wooden Houses

Location

The distribution of projects according to the location of urban, urban fringes and rural areas appears in Table 8.11 below. The majority of projects (65%) are located in rural areas, while the urban and urban fringes areas represent only 17% and 18% respectively. The lesser number of projects in urban and urban fringe areas was due to land scarcity. The price of land has become increasingly more expensive, so low cost housing construction has become less feasible in these locations.

Table 8.11:
DISTRIBUTION OF PUBLIC LOW COSTS HOUSING PROJECTS BY
LOCATION BETWEEN 1976 AND 1990

Type of Houses	3MP	4MP	5MP	Total (Percent)
Urban Areas	16	16	5	37 (17.2%)
Urban Fringes	18	20	0	38 (17.7%)
Rural	58	69	13	140 (65.1%)
Total (Percentage)	92 (42.8%)	105 (48.8)	18 (8.4%)	215 (100%)

Source: Researcher's First Stage/Quantitative Data Collection

The distribution of projects according to house types and location appears in Table 8.12 below. Almost half of these projects were terraced houses in rural areas. For wooden houses, the majority of projects located in the rural areas. A bigger proportion of high and medium rise flats were located in the urban areas than urban fringes and rural areas.

The location of projects inside or outside statutory local authority areas is shown in the following Table 8.13. The number of projects located inside local authorities areas (51%) is slightly higher than those outside local authority areas (49%) although the difference is only very small. The same table also depicts that during the 3MP and 4MP more projects were proposed and constructed inside local authority areas, but for the 5MP more projects were located outside the local authority areas.

Table 8.12:
HOUSING DESIGN AND LOCATION OF PUBLIC LOW COSTS HOUSING
PROJECTS BETWEEN 1976 AND 1990

Type of Houses \ Location	Urban	Urban Fringes	Rural	Total (Percent)
Single and Double Storey Terrace	13	25	105	143 (66.5%)
Semi-detached and Wooden Houses	1	6	22	29 (13.5%)
Medium and High Rise Flats	22**	4	8*	34 (15.8%)
Mixed type	1	3	5	9 (4.2%)
Total	92 (42.8%)	105 (48.8%)	18 (8.4%)	215 (100%)

Note: * All projects were medium rise flats

** Out of these figures, consisted of 6 high rise flats and 16 medium rise flats.

Source: Researcher's First Stage/Quantitative Data Collection

Table 8.13:
DISTRIBUTION OF PUBLIC LOW COSTS HOUSING PROJECTS BY LOCAL
AUTHORITIES BETWEEN 1976 AND 1990

Type of Houses	3MP	4MP	5MP	Total (Percent)
Inside Local Authorities	49	53	7	109 (50.7%)
Outside Local Authorities	43	52	11	106 (49.3%)
Total (Percentage)	92 (42.8%)	105 (48.8)	18 (8.4%)	215 (100%)

Source: Researcher's First Stage/Quantitative Data Collection

Although 65% projects were located in rural areas, 51% were inside local authority areas. This leads to the question whether these projects require planning permission from local authorities (see Table 8.14). A total of 41% of the projects were not subjected to planning approval by local authorities because when they were constructed outside local authority areas.³ Another 49% were subjected to planning approval but were given exemption. This was due to prior arrangements made between the state governments and the local authorities. Some local authorities have adopted the policy of exempting planning permission for development projects carried out by the federal and state governments. This is because of the close relationships between

the state and local governments. In addition these authorities depend upon the state and federal governments for their financial assistance. Only 10% of the projects were subjected to planning approval by local authorities.

Table 8.14:
CATEGORIES OF PLANNING APPROVAL REQUIRED FROM LOCAL
AUTHORITIES BETWEEN 1976 AND 1990

Type of Planning Requirements	3MP	4MP	5MP	Row Total (Percent)
Not Subjected to Planning Application	34	43	10	87 (40.8%)
Subjected to Planning Approval but Exempted	52	46	6	104 (48.8%)
Subjected to Planning Approval	4	16	2	22 (10.3%)
Total (Percentage)	90 (42.5%)	105 (48.8%)	18 (10.3%)	215 (100%)

Source: Researcher's First Stage/Quantitative Data Collection

Land Type

Public low cost houses were proposed or constructed on four categories of land as shown in Table 8.15. A large percentage of projects (77%) was proposed and constructed on state land. This was the favourite choice because the land was readily available⁴, there were shorter procedures and the total project cost was assumed to be less because the land belonged to the state governments. The other 18% of these projects were on private land, while a smaller percentage were of a mixed type between state and private land (2%) and institutional land (3%). Institutional land involved land owned by local authorities and other semi-government corporations.

Table 8.15:

**TYPES OF LAND WHERE PUBLIC LOW COSTS HOUSING PROJECTS
PROPOSED AND CONSTRUCTED BETWEEN 1976 AND 1990**

Types of Land	3MP	4MP	5MP	Total (Percent)
State land	79	70	14	163 (76.5%)
Private Land	9	30	2	41 (19.1%)
Mixed; state and private land	1	2	1	4 (1.9%)
Institutional land	3	3	1	7 (3.3%)
Total (Percentage)	92 (42.8%)	105 (48.8%)	18 (8.5%)	215 (100)

Source: Researcher's First Stage/Quantitative Data Collection

THE LENGTH OF TIME TAKEN FROM FORMULATION TO OCCUPATION

The overall implementation process of the public low cost housing construction includes the stages between project formulation and project completion. The process ends with the occupation of houses by buyers and tenants. The data analysis is involved with the calculation of the length of time taken between these various stages and sub-activities of the implementation process. For the purpose of this analysis the process is categorised into stages and sub-activities as follows:-

(1) Stage one: the projects formulation and planning stage

Sub-activities:

- 1.1. Projects formulation
- 1.2. Loan application to the Ministry of Housing and Local Government (MHLG)
- 1.3. Loan recommendation by the Technical Committee of Housing Loan (TCOHL)

(2) Stage two: the projects financial resourcing stage

Sub-activities:

- 2.1. Loan approval by the Treasury

2.2. Signing of loan agreement

2.3. Loan withdrawals and payments made to state governments

(3) Stage three: the projects construction stage

Sub-activities

3.1. Construction of projects begins

3.2. Construction of projects ends

(4) Stage four: the project completion stage

Sub-activities

4.1. Projects completion

4.2. House occupation by buyers and tenants

Table 8.16 provides information on the length of time taken between these four implementation stages and their sub-activities. Although 215 projects were selected as samples for this study, only 166 cases that completed the construction stage were included in this data analysis. The other 49 uncompleted projects were excluded from this analysis because they were not completed up to the construction stage. The rationale behind this decision of selecting only 166 completed projects was for fair comparisons between projects and implementation stages.

Table 8.16 shows that the mean length of time from project formulation to occupation was 83.9 months and up to the step of project completion was 79 months. Almost half of this time span was spent on the formulation and planning stage. The mean for the formulation and planning stage of 37.7 months was the longest time spent. The next longest time span was for the construction stage with a mean of 21 months. The table also highlights that the median for all implementation stages is shorter than the mean. This implies that about 50% of the projects experienced a shorter time span than the mean figure at every implementation stage.

Table 8.16:
**IMPLEMENTATION PROCESS OF THE PUBLIC LOW COST HOUSING
 PROGRAMME: THE LENGTH OF TIME TAKEN FROM THE FORMULATION
 STAGE TO OCCUPATION STAGE**
 (in Months)

Stages of Implementation Process (Variables Name)	Mean	Median	Std. Deviation	Minimum Maximum	N cases
1. Planning Stage: From project formulation to loan approval by TCOHL (PLANSTAG)	37.7	32.8	20.1	min: 0.5 max:123.2 var: 404	166
2. Resourcing Stage: From project approval by TCOHL to the first loan withdrawal (RESOCING)	15.6	12	11.6	min: 2.5 max: 81.6 var: 133.9	163
3. Construction Stage: Duration of project construction (CONSTRUC)	21	18	12.6	min: 5.5 max:75.7 Var: 159.6	166
4. Completion Stage: From end of construction to project occupation (COMSTAGE)	10.7	7.5	9.2	min:1.5 max:58.2 var: 84.6	164
5. Overall Process					
5.1. From project formulation to the beginning of construction (FORMBEGN)	53.4	50	29.2	min: 3.3 max: 146.9 var: 855.2	166
5.2. From project formulation to completion stage (SPAN)	79	75.2	33	min:20 max:163 var: 1112	165
5.3. From project formulation to occupation (FORMOCC)	83.9	80	32.8	min:24 max:165.1 var: 1077.3	165

Note:

The total cases were 166 projects, missing data occurred if the number of projects appeared less than this total number.

Source: Researcher's First Stage/Quantitative Data Collection

Table 8.17 compares the mean of time taken on major activities in each stage of the implementation process amongst the three five-year plans. This table also compares means, standard deviations, variance, minimum and maximum between various implementation stages and the five-year plans. The mean of time taken from the project formulation until occupation for five-year plans decreased very slightly from 84 months during 3MP to 83.4 months in 4MP but finally increased to 85.6 months in 5MP. The time taken from the project formulation until the completion stage (before occupation) was 79 months with a standard deviation of 33 months. The mean of project completion for the three five-year plans increased from 79 months in 3MP and 4MP to 82 months in 5MP. This stage was taken as the point of completion for the number of houses constructed at the end of a five-year plan, as discussed in Chapter 4. The overall mean of time taken for the planning stage between the project formulation and the loan approval is 37.7 months with a standard deviation of 20.1 months and this shows variability between the three five-year plans. During 4MP a shorter time was spent on the planning stage in contrast to the 5MP. For the resourcing stage, the 5MP was longer compared to the 3MP and 4MP. However for the 4MP a longer time was spent for the construction and completion stage. In summary the information provided by this table shows variability of mean between the stages and sub-stages of the implementation process as well as between the five-year plans.

The data analysis in Table 8.17 implies that almost half of the total time for the whole implementation process was spent for the projects' preliminary planning. Taking into account that projects were formulated six months before the beginning of any five-year plan, this suggested that on the average projects completed their planning stage in the middle of third year of any five-year plan. Similarly, on average, project construction began in the middle fourth year of the five-year plan. In general the mean of time needed to achieve the completion stage and occupation stage was about seven years. This implies that the average time needed to complete projects under this programme was about two five-year planning periods. The proportion of time required for the implementation of a project is about half to be spent on project planning and preliminary preparation, about a quarter for construction and another quarter for project resourcing and other necessary jobs related to its completion.

Table 8.17:
**IMPLEMENTATION PROCESS OF THE PUBLIC LOW COST HOUSING
PROGRAMME: THE LENGTH OF TIME TAKEN FROM THE FORMULATION
STAGE TO OCCUPATION STAGE**
(in Months)

Stages of Implementation Process (Variables Name)	Mean for all five-year plans (s.d)	Mean for 3MP (s.d)	Mean for 4MP (s.d)	Mean for 5MP (s.d)
1. Planning Stage:				
From project formulation to loan approval by TCOHL (PLANSTAG)	37.7 (20.1) N=166	38.9 (17.8) N=80	34.9 (20.4) N=74	47.0 (29.4) N=12
2. Resourcing Stage:				
From project approval by TCOHL to the first loan withdrawal (RESOCING)	15.6 (11.6) N=163	15.4 (12.7) N=79	15.2 (9.7) N=73	19.4 (14.5) N=11
3. Construction Stage:				
Duration of project construction (CONSTRUC)	21.0 (12.6) N=166	19.6 (13.9) N=80	22.7 (11) N=74	20.1 12.8 N=12
4. Completion Stage:				
From end of construction to project occupation (COMSTAGE)	10.7 (9.2) N=164	9.2 (7.8) N=80	12.9 (10.7) N=72	7.7 (4.7) N=12
5. Overall Process				
5.1. From project formulation to the beginning of construction (FORMBEGN)	53.4 (29.2) N=166	55.5 26.6 N=80	50.4 31.2 N=74	57.8 (34.4) N=12
5.2. From project formulation to project completion (SPAN)	79 (33) N=165	79 (32) N=80	79 (35) N=73	82 (35) N=12
5.3. From project formulation to occupation (FORMOCC)	83.9 (32.8) N=165	84 (31.9) N=80	83.4 (33.8) N=73	85.6 (35.2) N=12

Source: Researcher's First Stage/Quantitative Data Collection

Planning Stage: From Formulation to Loan Approval.

The planning stage is the point between the project formulation and loan approval by the Technical Committee on Housing Loans (TCOHL). This stage of preparation involves tasks, such as drawing up feasibility studies, investigating the proposed sites, preparing project costing and carrying out land surveys, preparing sites and building plans, etc. For the purpose analysing the length of time taken, this stage is divided as follows:-

- The time taken from the project formulation to the loan application. The variable for this point is known as FORMAPLY.
- The time taken from receipt of the loan application by the MHLG to when the decision is made by the TCOHL to approve the loan of a public housing project. The variable for this point is called as APLYTCHL.
- The time taken from project formulation to the loan approval by TCOHL. This covers both the two points above. This variable is called as PLANSTAG.

Table 8.18 provides information on the time taken for this planning stage for the three five-year plans. In total the time taken to complete the formulation and planning stage shows differences between the three five-year plans. For example the mean of time taken between the project formulation and the loan approval between the plans: the 3MP was 38.9 months with a standard deviation of 17.8 months; then 4MP decreased 34.9 months with a standard deviation of 20.4 months; and the 5MP increased to 47.8 months with a wider standard deviation of 30.7 months. An analysis by one-way ANOVA for variable FORMAPLY yields an F ratio of 4.8446 and F probability of .0090 which confirms that there is a significant difference of mean between the three five year plans at the significance level of 0.05⁽⁵⁾ The same statistical test for the variable PLANSTAG produces an F ratio of 2.1813 and F probability of .1162 confirms that there is no significant difference between the mean at an alpha of 0.05. This translates that the mean between the plans is similar. The one-way ANOVA test for APLYTCHL provides an F ratio of 1.4889 and F probability of .2287 which confirms that the mean between the plans is similar at the significant level of 0.05.

Table 8.18:
 THE LENGTH OF TIME TAKEN TO COMPLETE THE PLANNING STAGE BY
 THE FIVE-YEAR PLANS
 (Mean, standard deviation, minimum and maximum)

Five-year Plans	Length of time: from formulation to loan application (FORMAPLY)	Length of time: between application and approval of TCOHL (APLYTCHL)	Length of time for planning stage: from formulation to approval of TCOHL (PLANSTAG)
3MP (1976-1980)			
Mean	34.5	4.5	38.9
Standard deviation	17.8	6.5	17.8
Minimum	.5	.03	1
Maximum	90	44.2	90.6
Number of cases	80	80	80
4MP (1981-1985)			
Mean	27.7	7.2	34.9
Standard deviation	16.9	14	20.4
Minimum	.5	0	.5
Maximum	112	95.5	123.2
Number of cases	74	74	74
5MP (1986-1990)			
Mean	42.9	4.1	47
Standard deviation	29.8	4.7	29.4
Minimum	0	.5	.5
Maximum	118	18.9	121
Number of cases	12	12	12
Overall			
Mean	32.1	5.7	37.7
Standard deviation	18.9	10.5	20.1
Minimum	0	0	.5
Maximum	118	95.5	123.2
Number of cases	166	166	166

Source: Researcher's First Stage/Quantitative Data Collection

Table 8.19 compares the time taken for this planning stage by quartiles and median. In general the 4MP seems as the shortest amongst the three five-year plans.

Table 8.19
 THE LENGTH OF TIME TAKEN TO COMPLETE THE PLANNING STAGE BY
 THE FIVE-YEAR PLANS
 (Median and Quartiles)

Five-year Plans	Category	Length of time for planning stage
	First Quartile	26.9
3MP (1976-1980)	Second Quartile/ Median	38.5
	Third Quartile	54.4
	N of cases	80
	First Quartile	24.4
4MP (1981-1985)	Second Quartile/Median	28.9
	Third Quartile	41.7
	N of cases	74
	First Quartile	38.2
5MP (1986-1990)	Second Quartile \ Median	40.2
	Third Quartile	60.2
	N of cases	12
	First Quartile	24.9
Overall Total	Second Quartile \ Median	32.9
	Third Quartile	53
	N of cases	166

Source: Researcher's First Stage/Quantitative Data Collection

From the evidence provided by Table 8.18 and Table 8.19, the mean and median of the length for time spent for the planning stage varies between each plan. However, for the population there are not statistically significance differences between plans as proven by the one-way ANOVA test as mentioned above. The overall mean and median value of 32.1 and 32.9 months respectively implied that in general this public low-cost housing programme completed the planning stage in the beginning of the third year of the five-year plan.⁽⁶⁾

Financial Resourcing Stage

The financial resourcing stage involves four main important steps: firstly the loan approval by the TCOHL; secondly loan approval by the Treasury; thirdly the signing of the agreement between the Federal and various state governments; and, finally loan withdrawals by state governments. Data analysis for this financial resourcing stage involves calculating length of time taken between these sub-activities as follows:-

- The length of time taken for considering loan applications between the TCOHL decision and the Treasury approval. This variable is called TCHLTSRY.
- The time taken for the formalisation of loan agreements after they are approved by the Treasury. This variable is called TSRYAGRE.
- The time taken between the formalisation of loan agreements and the first loan withdrawal by the state governments. This variable is called AGRE1OUT.

The length of time involved for this resourcing stage is calculated by the difference between the date of TCOHL recommendation and the date of the first loan withdrawal. This variable is named as RESOCING.

Table 8.20 provides information on the length of time involved at this stage according to the three five-year plans. The overall mean for time taken between loan approval by TCOHL and further approval by the Treasury (variable TCHLTSRY) was 5.4 months with a standard deviation of 5.9 months. The mean of time for the three five-year plans was varied: the 3MP with an average of 5.2 months then 5.7 months in the 4MP and finally a slight decreased to 5.0 months in the 5MP. The mean for the variable TSRYAGRE shows a decreasing trend from 3MP to 5MP. This indicates that the process between the decision by the TCOHL and the signing of agreement became shorter towards the 1990s.

In normal circumstances a project construction begins after the agreement is signed between the two parties. This is followed by the first loan withdrawal by the state governments. However as depicted in 8.20, some of the minimum time for variable AGRE1OUT is expressed in negative figures; this means the first loan

withdrawal was made even before the agreement had formalised between the two levels of governments. The overall mean of time taken between the agreement signed and the first loan withdrawal was 4.9 months with a standard deviation of 10.1 months. The mean for the variable AGRE1OUT showed variability between plans and became longer in the 5MP. 8.20 also depicts information about the resourcing stage where it exhibits an increasing length of time in 5MP (19.5 months) when compared to the previous five-year plans (15.4 months for 3MP and 15.2 months for 4MP).

Statistical tests by one-way ANOVA however confirm that there was no significant difference for this resourcing stage between the five-year plans. A test to the variable RESOCING produced an F ratio of .6380 with F probability of .5297 confirming that there was no significant difference between the five-year plans at the significance level of 0.05. Another test to the variable TCHLTSRY produced an F ratio of .1655 with F probability of .8476 confirming that there was no significant difference between the five-year plans at the significance level of 0.05. Also one-way ANOVA result on the variable TSRYAGRE produced an F ratio of 1.0088 with F probability .3669 which confirmed that there was no significant difference between the five-year plans at the significance level of 0.05. Variable AGRE1OUT produced an F ratio of 1.7690 with F probability of .1738 confirming that there was no significant difference between the five-year plans at the significance level of 0.05.

Construction Stage

The mean for the overall construction duration was 21 months, with a standard deviation of 12.6 months. The mean length of construction time during 3MP was 19.6 months. This increased to 22.7 months in the 4MP and slightly decreased to 21 months in the 5MP (see Table 8.21). An analysis of variance for the duration of construction provided no significant difference of mean between the three five-year plans. The test produced an F ratio of 1.2050 with F probability of 0.3024 that the mean between plans was similar at the significant level of 0.05.

Table 8.20:
TIME TAKEN TO COMPLETE THE RESOURCING STAGE BY THE FIVE-
YEAR PLANS 1976-1990

Plans and Variables	The length of time between TCOHL and Treasury approval (TCHLTSRY)	The length of time between Treasury approval and loan agreements (TSRYAGRE)	The Length of Time between loan agreement and the first loan withdrawal (AGRE1OUT)	The length of time for the financial resourcing stage (RESOCING)
3MP (1976-1980)				
Mean	5.2	5.6	4.8	15.4
Standard deviation	7.2	6.1	11.1	12.7
Minimum	0	0	-21.2	2.5
Maximum	56.4	35.6	72.1	81.6
Number of cases	80	80	79	79
4MP (1981-1985)				
Mean	5.7	5.1	4.2	15.2
Standard deviation	4.4	4.3	7.0	9.7
Minimum	0	0	-2.3	3.3
Maximum	15.3	27.5	42.7	55.8
Number of cases	74	74	72	73
5MP (1986-1990)				
Mean	5.0	3.4	10	19.4
Standard deviation	4.3	1.7	16.3	14.5
Minimum	.5	.72	-0.6	6
Maximum	15.1	5.7	46.5	50.6
Number of cases	12	12	12	11
Overall (1976-1990)				
Mean	5.4	5.2	4.9	15.6
Standard deviation	5.9	5.2	10.1	11.6
Minimum	0	0	-21.2	2.5
Maximum	56.4	35.6	72.1	81.6
Number of cases	166	166	163	163

Notes:

(a) 0 for minimum value refers to the same date between two activities.

(b) Figures in minus signs refer to the first loan withdrawal that was made earlier than the date of an agreement formally signed between states and federal governments.

Source: Researcher's First Stage/Quantitative Data Collection

Table 8.21:

**THE TIME TAKEN TO COMPLETE THE CONSTRUCTION STAGE BY THE
FIVE-YEAR PLAN 1976-1990**

Plans and Statistics	Third Malaysia Plan (1976-80)	Fourth Malaysia Plan (1981-85)	Fifth Malaysia Plan (1986-90)	Overall Total (1976-90)
Mean	19.6	22.7	20.1	21
Standard deviation	13.9	11	12.8	12.6
Minimum	5.5	9.9	6.9	5.5
Maximum	75.7	63	49.9	75.7
Number of cases	80	74	12	166
ANOVA Between Group				
F-ratio				13.9721
F Probability				.3024
Decision				No difference between group mean

Source: Researcher's First Stage/Quantitative Data Collection

Completion Stage

This stage involves two important steps; the project completion and project occupation by buyers or renters. After the building construction ends and the work of contractors has been certified as completed by the implementing agency, normally some additional work is still required such as for water and electricity supply, construction of power sub-stations, additional building and infrastructure work, etc. In some states, during the later stage of 4MP and early 5MP, a certificate of fitness for occupation was imposed by some local authorities. The housing project is considered complete when it is handed over to the Housing Division of the State Secretariats by an implementing agency. Hence, the roles of an implementing agency ends at this stage. After the construction is completed, the next stage is the selection of tenants or buyers. The whole implementation process is completed with the handing over of house keys to the successful tenants or buyers. The calculation on the length of time involved at this stage is shown in Table 8.22. Data analysis for this stage is as follows:-

- The length of time taken to complete additional building and infrastructural work, water and electricity supply and to obtain certificate of fitness for occupation from local authorities (ENDCOMP).

- The time taken to finalise arrangements for house occupation by house buyers and tenants (COMPOCC).
- The length of time for the completion stage which is the difference between the date of end construction and the date of house occupation (COMSTAGE).

Table 8.22:

THE TIME TAKEN FOR THE COMPLETION STAGE BY THE FIVE-YEAR PLAN 1976-1990

Plans and Variables	The length of time between end of construction and final completion (ENDCOMP)	The length of time between final completion and occupation (COMPOCC)	The length of time for the completion stage (COMSTAGE)
3MP (1976-1980)			
Mean	4.5	4.8	9.2
Standard deviation	5.1	5.8	7.8
Minimum	0	0.9	2
Maximum	27	45	51.5
Number of cases	80	80	80
4MP (1981-1985)			
Mean	7.8	5.3	12.9
Standard deviation	10.5	4.83	10.7
Minimum	0.0	0.1	1.5
Maximum	55.6	25.8	58.2
Number of cases	73	72	72
5MP (1986-1990)			
Mean	3.8	3.9	7.7
Standard deviation	5	1.9	4.7
Minimum	0.0	2.0	2.7
Maximum	19	7.0	20.9
Number of cases	17	12	12
Overall (1976-1990)			
Mean	5.9	4.9	10.7
Standard deviation	8.1	5.2	9.2
Minimum	0.0	0.1	1.5
Maximum	55.6	45.0	58.2
Number of cases	165	164	164

Source: Researcher's First Stage/Quantitative Data Collection

Table 8.23 in this thesis provides a summary of one-way ANOVA tests for several implementation process from the project formulation to the completion stage by the three five-year plans for the 166 completed projects. The statistical tests confirmed that there were no significant difference for most of the implementation

stages and their sub-activities except for three variables FORMAPLY , ENDCOMP and COMSTAGE.

Similar tests were also carried out for all the 215 projects which consisted of the completed and uncompleted projects. The statistical results are shown in Table 8.24 in this thesis. By calculating the completed and uncompleted projects together, the analysis produced a slight different results where only one variable (ENDCOMP) was statistically significant difference for implementation process.

PROJECT COMPLETION ACCORDING TO STATES

Table 8.25 provides information related to the length of time for the projects' implementation stages. Overall the mean implementation stages varied between states. For the planning stage, Negeri Sembilan had the shortest mean of 25.8 months whereas Pahang had the longest mean of 48.7 months. For the resourcing stage Trengganu had the shortest mean of 11.1 months, in contrast to Perak with the longest mean of 18.4 months. For the construction stage, Negeri Sembilan again had a shortest mean of 17.7 months while Johor had the longest mean of 28.8 months. Finally for the completion stage, Pahang had the shortest mean of 6.1 months whereas Pulau Pinang was the longest with 14.2 months.

The summary for the analysis of variance of various implementation stages for the seven states for 166 completed projects is shown in the Table 8.26 in this thesis. The statistical tests of one-way ANOVA provided results showing significant difference between the states for the planning stage (variables FORMAPLY and PLANSTAG), the time between the agreement signed and construction begins (AGREBEGN) and the overall implementation process of variables FORMBEGN, SPAN and FORMOCC. Similar statistical tests were also carried out for all the 215 cases and produced similar results.

Table 8.23:
 TESTING OF THE ANALYSIS OF VARIANCE OF IMPLEMENTATION
 STAGES AND FIVE-YEAR PLANS BASED ON THE 166 COMPLETED
 PROJECTS.
 (95% confidence interval)

Variable	F-Ratio	F-Prob	N and d.f.	Decision
FORMAPLY	4.8446	.0090	N= 165 d.f = 2	Significant difference; the mean between plans is not similar.
APLYTCHL	1.4889	.2287	N= 165 d.f =2	No Significant difference; the mean between plans is no difference.
PLANSTAG	2.1813	.1162	N= 165 d.f =2	No Significant difference; the mean between plans is no difference.
TCHLTSRY	0.1655	.8476	N= 165 d.f =2	No significant difference; the mean between plans is no difference at 0.5 level.
TSRYAGRE	.3941	.6749	N= 162 d.f =2	No significant difference; the mean between plans is no difference at 0.5 level.
AGREIOUT	1.7690	.1738	N= 162 d.f =2	No significant difference; the mean between plans is no difference at 0.5 level.
RESOCING	.6380	.5297	N = 162 d.f =2	No Significant difference; the mean between plans is no difference at 0.5 level.
CONSTRUC	1.2050	.3024	N= 166 d.f =2	No Significant difference; the mean between plans is similar.
ENDCOMP	3.644	.0283	N= 164 d.f =2	Significant difference; the mean between plans is not similar.
COMPOCC	.4316	.6502	N= 163 d.f =2	No significant difference; the mean between plans is no difference at 0.5 level.
COMSTAGE	3.7817	.0248	N= 163 d.f =2	Significant difference; the mean between plans is different at 0.5 level.
FORMBEGN	.7250	.4859	N= 165 d.f =2	No significant difference; the mean between plans is no difference at 0.5 level.
SPAN	.0367	.9640	N= 164 d.f =2	No significant difference; the mean between plans is no difference at 0.5 level.
FORMOCC	.0231	.9771	N= 164 d.f =2	No significant difference; the mean between plans is no difference at 0.5 level.

Note: Analysis based on 166 completed projects and excluded the 49 uncompleted projects. N lesser than 166 cases means missing data.

Source: Researcher's First Stage/Quantitative Data Collection

Table 8.24:
 TESTING OF THE ANALYSIS OF VARIANCE OF IMPLEMENTATION
 STAGES AND FIVE-YEAR PLANS: BASED ON 215 CASES
 (95% confidence interval)

Variable	F-Ratio	F-Probability	N and d.f	Decision
FORMAPLY	2.4299	.0908	N= 188 d.f= 2	No significant difference; the mean between plans is no difference at 0.5 level.
APLYTCHL	1.3694	.2569	N= 184 d.f=2	No significant difference; the mean between plans is no difference at 0.5 level.
PLANSTAG	1.1359	.3234	N = 186 d.f =2	No significant difference; the mean between plans is no difference at 0.5 level.
TCHLTSRY	.2248	.7989	N =186 d.f =2	No significant difference; the mean between plans is no difference at 0.5 level.
TSRYAGRE	1.2295	.2949	N = 179 d.f =2	No Significant difference; the mean between plans is similar.
AGREIOUT	1.7572	.1759	N = 160	No Significant difference; the mean between plans is similar.
RESOCING	.4685	.6267	N = 172 d.f =2	No Significant difference; the mean between plans is no difference at 0.5 level.
CONSTRUC	1.1670	.3139	N= 168 d.f=2	No Significant difference; the mean between plans is similar.
ENDCOMP	3.644	.0283	N= 164 d.f=2	Significant difference; the mean between plans is not similar.
COMPOCC	.4314	.6503	N= 164 d.f=2	No significant difference; the mean between plans is no difference at 0.5 level.
COMSTAGE	.0428	.9581	N= 163 d.f=2	No significant difference; the mean between plans is no difference at 0.5 level.
FORMBEGN	.8413	.4330	N= 169 d.f=2	No significant difference; the mean between plans is no difference at 0.5 level.
SPAN	.0364	.9642	N= 164 d.f=2	No significant difference; the mean between plans is no difference at 0.5 level.
FORMOCC	.0231	.9771	N= 164 d.f=2	No significant difference; the mean between plans is no difference at 0.5 level.

Note: Analysis based on the sample of 215 cases which consisted of 166 completed projects and the 49 uncompleted projects. N lesser than 215 cases means missing data. The large missing data was mainly as the result of uncompleted projects which did not achieve certain implementation process.

Source: Researcher's First Stage/Quantitative Data Collection

Table 8.25:

**THE LENGTH OF TIME TAKEN AT SEVERAL IMPLEMENTATION STAGES
BY STATES AND FIVE-YEAR PLANS**

(mean and standard deviation in months)

STATE & five-year plans	The Planning Stage (PLANSTAG)	The Financial Resourcing Stage (RESOCING)	The Construction Stage (CONSTRUC)	The Completion Stage COMSTAGE
Johor				
Mean	40.9	14.9	28.8	9.7
Std.dev	18.3	9.1	19.2	7.6
N	19	19	19	18
N.Sembilan				
Mean	25.8	15.1	17.7	13.2
Std.dev	16.2	8.4	5.8	10.7
N	22	20	22	21
Selangor				
Mean	38.9	16	20	11.3
Std.dev	16.8	14.9	13.4	11.9
N	40	39	40	40
Perak				
Mean	33.8	18.4	19.7	10.3
Std.dev	23.7	13.6	13	6.4
N	26	26	26	26
P.Pinang				
Mean	32.9	13.3	23.6	14.9
Std.dev	10.1	4.4	13.5	10.2
N	16	16	16	16
Pahang				
Mean	48.7	17.7	20.3	6.1
Std.dev	20.3	13	8.2	2.5
N	24	24	24	24
Trengganu				
Mean	41.4	11.1	19.7	10.1
Std.dev	25.5	6.5	10.2	8.1
N	19	19	19	19
All States				
Mean	37.7	15.6	21	10.7
Std.dev	20.1	11.6	12.6	9.2
N	166	163	166	164

Source: Researcher's First Stage/Quantitative Data Collection

Table 8.26: TESTING OF THE ANALYSIS OF VARIANCE OF IMPLEMENTATION STAGES BY STATES

(Based on 166 cases)

(95% confidence interval)

Variable	F Ratio	F Probability	Cases and Degree of Freedom	Decision
FORMAPLY	3.1425	.0061	N = 166 d.f.= 6	Significant difference; the mean between states is not similar.
APLYTCHL	.7916	.5777	N = 166 d.f.= 6	No Significant difference; the mean between states is no difference.
PLANSTAG	3.2555	.0048	N = 166 d.f.= 6	Significant difference; the mean between states is not similar.
TCHLTSRY	1.7557	.1115	N = 166 d.f.= 6	No Significant difference; the mean between states is not similar.
TSRYAGRE	1.6704	.1315	N = 166 d.f.= 6	No significant difference; the mean between states is no difference at 0.5 level.
AGREBGN	5.0688	.0001	N = 166 d.f.= 6	Significant difference; the mean between states is not similar at 0.5 level.
RESOCING	.9839	.4381	N = 163 d.f.= 6	No Significant difference; the mean between states is similar.
CONSTRUC	1.7459	.1137	N = 166 d.f.= 6	No Significant difference; the mean between states is no difference.
ENDCOMP	2.0504	.0621	N = 165 d.f.= 6	No Significant difference; the mean between states is no difference.
COMPOCC	.7921	.7921	N = 164 d.f.= 6	No significant difference; the mean between states is no difference at 0.5 level.
COMSTAGE	2.0928	0.0578	N = 164 d.f.= 6	No significant difference; the mean between states is no difference at 0.5 level.
FORMBEGN	5.5547	.0000	N = 166 d.f.= 6	Significant difference; the mean between states is not similar.
SPAN	2.9945	.0085	N = 165 d.f.= 6	Significant difference; the mean between states is not similar.
FORMOCC	3.2574	.0048	N = 165 d.f.= 6	Significant difference; the mean between states is not similar.

Source: Researcher's First Stage/Quantitative Data Collection

UNCOMPLETED PROJECTS

There are 49 cases in the samples which categorised as uncompleted projects. Out of this 49 projects only 22 projects completed the planning stage and finally only 3 projects achieved the construction stage however were not completed. Table 8.27 provides a summary of one-way ANOVA tests for several implementation stages during the three five-year plans for these uncompleted projects. The statistical tests confirmed that there were no significant difference for all of the implementation stages for these uncompleted projects. Similarly the statistical tests between the states confirmed that there were no significant difference for all of the implementation stages for these uncompleted projects.

Table 8.27:

RESULTS OF ONE-WAY ANOVA TESTS FOR FIVE-YEAR PLANS OF UNCOMPLETED PROJECTS:

(95% confidence interval)

Variable	F Ratio	F Probability	Cases and Degree of Freedom	Decision
FORMAPLY	.7590	.4812	N = 22 d.f.= 6	No Significant difference; the mean between states is not similar.
APLYTCHL	.0994	.9060	N = 17 d.f.= 6	No Significant difference; the mean between states is no difference.
PLANSTAG	.4862	.6331	N = 22 d.f.= 6	No Significant difference; the mean between states is not similar.
TCHLTSRY	.2488	.7833	N = 15 d.f.= 6	No Significant difference; the mean between states is not similar.
TSRYAGRE	.2082	.8152	N = 13 d.f.= 6	No significant difference; the mean between states is no difference at 0.5 level.
AGREBGN	1.3640	.5179	N = 3 d.f.= 6	No significant difference; the mean between states is no difference at 0.5 level.
RESOCING	.9421	.4407	N = 8 d.f.= 6	No Significant difference; the mean between states is similar.

Source: Researcher's First Stage/Quantitative Data Collection

The statistical tests carried out confirmed that only a very little difference occurred for the mean length of time taken for the four implementation stages over the

three plans. This implied that the programme experienced few changes, despite intentions to speed implementation, as expressed in five-year plan documents, some policy statements and a number of efforts made to achieve this aim. However, comparisons between states showed that there were significant differences. These include the planning stage, when to begin project construction and the total length of time of project completion.

PROGRAMME PREPARATION

Project formulation involves a certain degree of preparation, which includes site identification, site selection, land report assessment, feasibility studies, land surveying, etc. In this section data analysis is made for several implementation stage variables such as PLANSTAG, RESOCING, CONSTRUC, FORMBEGN, SPAN and FORMOCC. These implementation stage variables are tested against several 'preparation variables' aimed to find out whether the degree of project's preparation affected the project's performance on the length of time to complete a project. The preparation variables are as follows:-

- **IDENTIFY**: when site identification was made
- **EXTEND**: whether an extension from the previous project
- **SITECHNG**: whether occurred a change of site
- **LANDREPT**: when the land report was made
- **FEASIBIL**: the type of feasibility studies made for the project
- **SURVEY**: when the land survey was made for the project.

Site identification

Site identification is one of the basic tasks during project preparation. When a list of proposed projects was submitted by the state governments to the MHLG, some of the project sites had been identified, while some others were not. Table 8.28 shows that 57% of projects had their sites identified before project formulation stage. This implies that when projects were proposed for the five-year plans, some of them had no preliminary decisions on their proper sites. While the other 13% were never identified even after the project formulation stage. These projects were later cancelled because the state governments were indecisive about them.

Table 8.28:

WHEN SITE IDENTIFICATION WAS MADE

WHEN SITE IDENTIFICATION WAS MADE	Cases	Percentage
1. Before the Project Formulation	123	57.2%
2. Within 3 months after project formulation	54	25.1%
3. More than 3 months after formulation	10	4.7%
4. Never identified	28	13%
Total	215	100%

Note:

1. Analysis based on the all 215 cases of completed and incomplete projects.
- 2 missing cases: 0

Source: Researcher's First Stage/Quantitative Data Collection

Comparison of means by t-test was engaged to find out whether the "site being identified before or after the project formulation stage" had any significant difference to the length of implementation process. This test produced results that projects with sites identified before the formulation stage had a shorter mean, while projects with sites identified after the projects were formulated had a longer mean (see Table 8.29). The t-test results show that significant differences occurred at the planning stage and the overall process but not at the resourcing and construction stage. This is show that identification of site before the project formulation stage ensures shorter times for: (a) the planning stage; (b) commencing project construction; (c) the time taken from formulation to completion of building construction, and; (d) the overall process from formulation to occupation of houses by occupants.

Table 8.29:

ANALYSIS OF WHEN SITE IDENTIFICATION MADE TOWARDS
IMPLEMENTATION STAGES

Implementation Stage (Variable)	Before Project Formulation (BEFORE)	After Project Formulation (AFTER)	t-test and 2 tail significance
1.1 The Planning Stage From formulation to loan application to MHLG (FORMAPLY)	Mean: 28.4 months Std.dev: 17.5 months cases (n): 114	Mean: 40 months Std.dev: 19.6 months cases (n): 52	F= 1.757 P=0.187 <u>Significant</u> difference of .0000 at alpha 0.05
1.2 The Planning Stage From formulation to loan approval by the TCOHL (PLANSTAG)	Mean: 34.7 months Std.dev: 20.2 months cases (n): 114	Mean: 44.4 months Std.dev: 18.3 months cases (n):50	F= 0.046 P= 0.830 <u>Significant</u> difference of .0004 at alpha 0.05
2. The Resourcing Stage From loan approval by the TCOHL the first loan withdrawal (RESOCING)	Mean: 14.9 months Std.dev: 10.8 months cases (n): 114	Mean: 17 months Std.dev: 13.1 months cases (n): 49	F= 0.509 P= 0.477 <u>No Significant</u> difference of .276 at alpha 0.05
3. The Construction Stage Duration of project construction (CONSTRUC)	Mean: 20.7 months Std.dev: 12.7 months cases (n): 114	Mean: 21.5 months Std.dev: 12.5 months cases (n): 52	F= 0.368 P=0.545 <u>No Significant</u> difference of .706 at alpha 0.05
4.1 The Overall Process From project formulation to beginning of construction (FORMBEGN)	Mean: 47.8 months Std.dev: 27.8 months cases (n): 114	Mean: 65.4 months Std.dev: 28.9 months cases (n): 52	F= 0.042 P=0.837 <u>Significant</u> difference of .000 at alpha 0.05
4.2 The Overall Process From project formulation to project completion (SPAN)	Mean: 75.2 months Std.dev: 32.9 months cases (n): 114	Mean: 88.3 months Std.dev: 32.9 months cases (n): 51	F= 0.118 P=0.731 <u>Significant</u> difference of .019 at alpha 0.05
4.3. The Overall Process From project formulation to occupation of houses (FORMOCC)	Mean: 79.9 months Std.dev: 32.3 months cases (n): 113	Mean: 92.3 months Std.dev: 32.9 months cases (n): 51	F= 0.077 P=0.782 <u>Significant</u> difference of .023 at alpha 0.05

Note: Analysis based on the 166 completed cases and exclude the 49 incomplete cases

Source: Researcher's First Stage/Quantitative Data Collection

The effect of 'extension' on stages of the implementation process

'Extension projects' are projects which were continuing from the previous phase. They were assumed to enjoy several advantages over non-extension projects, such as prior knowledge about the site (in some cases sites and infrastructure facilities were already available). Therefore, it was presumed that the length of time for certain stages of implementation would be shorter than the non-extension projects. Statistical tests were carried out to perceive if 'extension' and 'non-extension' projects have any effect on the length of time of projects' implementation process. The mean for the planning stage (variable PLANSTAG) for extension projects was 36.4 months with a standard deviation of 24.1 months while non-extension projects had slightly a longer mean of 38.1 months with a standard deviation of 18.8 months. The mean for the length of time from the 'formulation stage to the completion stage' (variable SPAN) for extension projects was 76.6 months with a standard deviation of 37.8 months while non-extension projects were with a longer mean of 80 months and a standard deviation of 32 months. Chi-square test and t-test confirmed that there were no significant difference between these two types of projects.

Change of Project Site

During the course of the implementation process, changes of site from the originally intended location to another location sometimes occurred. Statistical tests comparing means were carried out. Table 8.30 below provides a summary of tabulations for projects showing whether a change of site occurred or not. During the three five-year plans' periods about 19% to 30% of projects had experienced a change of site. During the 4MP about 30% of projects experienced changes of sites. The overall mean for changes of site is 27%. This implied that in general about one quarter of projects involved a change of site.

Table 8.30:

CHANGE OF ORIGINAL PROJECTS SITE BY FIVE-YEAR PLAN

Plan	Never Change Site (NO)	Change of Site Occurred (YES)	Total
Third Malaysia Plan	63	17	80 (48.2%)
Fourth Malaysia Plan	61	13	74 (44.6%)
Fifth Malaysia Plan	10	2	12 (7.2%)
Total	134 (80.7%)	32 (19.3%)	166 (100%)

Note: Analysis based on the 166 completed cases and exclude the 49 incomplete cases

Source: Researcher's First Stage/Quantitative Data Collection

Information of site changes of sites amongst the seven states is presented in the Table 8.31. The percentage of projects which change site amongst the states ranges from 12.5% to 47.1% with Pulau Pinang not changing its projects' sites at all. Johor has the lowest percentage (12.5%) while Pahang has the highest percentage (47.1%) of all the states.

Table 8.31:

CHANGING OF ORIGINAL PROJECT SITE BY STATE

States	Percentage of Projects Changing Site
Pulau Pinang	0%
Perak	12.1%
Johor	12.5%
Negeri Sembilan	20%
Trengganu	30.8%
Selangor	43.5%
Pahang	47.1%
Overall total	27%

Source: Researcher's First Stage/Quantitative Data Collection

Table 8.32 below shows the mean of time taken to reach several stages of the implementation process by comparing projects without a change of site and projects experiencing a change of site. It is evident that projects without a change of site

experienced a shorter length of time at several stages of the implementation process and their mean is statistically significant from those were there was no site change.

Table 8.32:
MEAN LENGTH OF TIME BY CHANGE OF SITE TO SEVERAL POINTS OF IMPLEMENTATION PROCESS.

Implementation Stage (Variable)	No Change of Site (NO)	Change Occurred (YES)	t-test and 2 tail significance
1. The Planning Stage: From formulation to loan approval by the TCOHL (PLANSTAG)	Mean: 36.3 months Std.dev: 20.1 months cases (n):134	Mean: 43.5 months Std.dev: 19.2 months cases (n):32	F= 1.161 P= .283 <u>No Significant</u> difference of .071 at alpha 0.05
2.1. The Overall Stage: From formulation to the beginning of construction (FORMBEGN)	Mean: 50.4 months Std.dev: 28.1 months cases (n): 134	Mean: 66 months Std.dev: 30.8 months cases (n):32	F= 4.074 P=.0.26 <u>Significant</u> difference of .0000 at alpha 0.05
2.2 The Overall Stage: From formulation to houses occupation (FORMOCC)	Mean: 80.1 months Std.dev: 31 months cases (n): 133	Mean: 99.6 months Std.dev: 36 months cases (n):32	F= 1.939 P= 0.166 <u>Significant</u> difference of .002 at alpha 0.05

Note: Analysis based on the 166 completed cases and exclude the 49 incomplete cases

Source: Researcher's First Stage/Quantitative Data Collection

Amendment to Projects

Besides changes of site, some of projects also experienced other amendments. These modifications occurred after projects had been formulated. Table 8.33 below shows types of amendments which occurred to projects throughout the three five-year plans 31% of the total projects sampled experienced some modifications.

Table 8.33:

TYPE OF AMENDMENTS TO PROJECTS

Type of Amendment	Percent	Cumulative Percent
Amendment of Project's Target Units	4.2%	4.2%
Amendment of House Type	13.1%	17.3%
Relocation to Another Location but Within the Same District	4.7%	26.6%
Amendment of Project Target, Type & Location	4.7%	26.6%
Relocation to Another District	9%	27.8%
Cancellation or Postponement of the Project	3.3%	30.8%
Projects Without Amendment	69.2%	100%

Source: Researcher's First Stage/Quantitative Data Collection

Table 8.34 provides information on the length of time taken at several points of the implementation process by comparing projects without any modification and projects that have experienced a modification. The analysis based on comparing means shows that projects without modification have shorter means. For example the length of time taken from the project formulation until completion of building stage (SPAN), the mean for projects without modification of 76.6 months is shorter by 15.9 months than the mean of projects with modifications of 92.6 months. The time taken to complete planning stage (PLANSTAG) and to reach beginning of construction (FORMBEGN) has no significant difference between projects with or without modifications. However the time taken to reach completion of building construction (SPAN) and project occupation (FORMOCC) shows significant differences between these two type of projects.

When the land report was made

An analysis was also carried out to find *whether 'when the land report was made'* has any significance to the time taken from formulation to the completion of building construction (variable SPAN). The data analysis showed that projects where the 'land report was made before the project was formulated' had the shortest mean of 74.3 months with a standard deviation of 34.8 months. This is lower than the mean of projects with the land report made after project being formulated of 82 months. The analysis shows that the longer the time made for preparation of the land report the longer the time spent from formulation to building completion stage. The results of the analyses are as in Table 8.35.

Table 8.34:
MEAN LENGTH OF TIME BY PROJECT AMENDMENTS TO SEVERAL
POINTS OF IMPLEMENTATION PROCESS.

Implementation Stage (Variable)	No Amendment (NO)	Amendment to Projects (YES)	t-test and 2 tail significance
<u>1. The Planning Stage:</u> From formulation to loan approval by the TCOHL (PLANSTAG)	Mean: 36.4 months Std.dev: 19.4 months cases (n): 139	Mean: 44 months Std.dev: 22.5 months cases (n): 27	F= 1.378 P=0.242 <u>No Significant</u> difference of .073 at alpha 0.05
<u>2.1. The Overall Stage:</u> From formulation to the beginning of construction (FORMBEGN)	Mean: 52.4 months Std.dev: 28.2 months cases (n): 139	Mean: 58.3 months Std.dev: 34.2 months cases (n): 27	F= 2.974 P=.086 <u>No Significant</u> difference of .341 at alpha 0.05
<u>2.2 The Overall Stage:</u> From formulation to the completion stage (SPAN)	Mean: 76.6 months Std.dev: 30.5 months cases (n): 138	Mean: 92.6 months Std.dev: 43.2 months cases (n): 27	F= 10.090 P=.002 <u>Significant</u> difference of .023 at alpha 0.05
<u>2.3 The Overall Stage:</u> From formulation to the houses occupation (FORMOCC)	Mean: 81.2 months Std.dev: 29.9 months cases (n): 138	Mean: 97.4 months Std.dev: 43.2 months cases (n): 27	F= 10.090 P=.002 <u>Significant</u> difference of .023 at alpha 0.05

Note: Analysis based on the 166 completed cases and exclude the 49 incomplete cases

Source: Researcher's First Stage/Quantitative Data Collection

Table 8.35:

**THE TIME TAKEN BETWEEN FORMULATION AND BUILDING
COMPLETION (VARIABLE SPAN) BY WHEN LAND REPORT WAS
PREPARED**

When Land Report Made	Mean (Months)	Std.Dev (Months)	Cases
Before Project's Formulation	74.3	34.8	58
Within 3 Months After Formulation	77.6	30.5	92
Between 3 and 6 After Formulation	102.3	30.4	12
More than 6 Months After Formulation	113.7	133.7	3
t-test for independent samples			
land report prepared before project formulation	74.3	34.8	58
land report prepared after project formulation	81.97	32.4	107
F= .780 P= .78 2-tail significant .156 at alpha 0.05			

Note: Analysis based on the 166 completed cases and exclude the 49 incomplete cases

Source: Researcher's First Stage/Quantitative Data Collection

Feasibility studies

Searching through records of PLCHP one can find that feasibility studies were prepared for projects. Three types of feasibility studies made. The first category was a 'working paper' which contained brief proposals of 'three to four pages report' prepared for the proposed project. Next, was a 'technical report' which was a comprehensive report containing detailed technical information on the proposed project. Finally, there was 'the technical and financial report' which contained comprehensive information on technical matters and the financial viability of the proposed projects. This type of report was usually prepared by a team of consultants. However about 14.5% of the completed projects were found not to have any feasibility studies. The statistical analyses show that 'well-prepared projects' have a shorter time span for completion. Projects with 'detailed technical and financial studies' proved to take the shortest time to reach completion stage of 56.5 months with a standard deviation of 33.3 months. However, projects where feasibility studies were not available have the mean of 75.6 months with a standard deviation of 29.7 months. Results of the statistical tests are as in the Table 8.36:-

Table 8.36:
TYPE OF FEASIBILITY STUDIES AND PROJECTS' COMPLETION TIME
(mean in months)

Type of Feasibility Studies Made	The Planning Stage (PLANSTAG)	From Formulation to the Completion (SPAN)	N
Feasibility studies were not available	33.6	75.6	25
Working paper	38.5	80	120
Technical report	40.5	81.8	18
Detailed technical and financial studies	13.8	56.5	2
Overall samples	37.7	79.3	165

Note: Analysis based on the 166 completed cases and exclude the 49 incomplete cases

missing case = 1 case

Source: Researcher's First Stage/Quantitative Data Collection

When the land survey was made for the project.

The next data analysis was to see whether a land survey being carried out had any effect on projects' completion time. In some of the projects, land surveys were carried out before the project was formulated and in some projects it was done after the projects had been formulated. The purpose of the land survey was to provide precise information about the size of land, exact boundaries and its topographical information. It helped in the preparation of a site plan, the calculation of project density, the estimate of the number of houses that can be built and to a certain extent with project costing. The statistical analysis shows that projects where land survey was carried out before the project was formulated had a shorter mean of completion period of 68.4 months with 34.3 months standard deviation. On the other hand, projects where a land survey was carried out after the project was formulated, had a longer mean of length of time for completion which was 78.4 months and a standard deviation of 28.8 months. The result of analysis appears in Table 8.37 below:-

Table 8.37:

WHEN THE LAND SURVEY MADE FOR THE PROJECT AND PROJECT COMPLETION.

Was Survey Carried Out Before Project Formulation?	Mean (month)	Std.Dev (month)	Cases
Yes	71.0	37.9	36
No	81.5	31.7	129
Mean difference/total	-10.5		165
t-test for equality of means:			
F= 1.971			
P= 0.162			
2-tail significant = 0.095 at alpha 0.05			

Note: Analysis based on the 166 completed cases and exclude the 49 incomplete cases

Source: Researcher's First Stage/Quantitative Data Collection

Conclusion on Project Preparation:

The statistical tests show that projects prepared before project formulation, without site change and without modification took a shorter time to implement. For projects to achieve a short completion time it seems necessary to have done adequate preparation before project formulation.

PROJECTS' FINANCIAL RESOURCING

This section looks at financial resourcing, including: allocation of funds made for the programme; the amount of loan approved for the projects; construction costs; total project costs; and, project costs adjusted to 1990's price. The analysis also compares plans, states and implementing agencies.

Allocation of Funds

When projects are formulated they are appropriated with project finance. The amount of funds approved by central agencies is based on project estimates put forward by state governments and matched with policy on maximum loan limits set by central agencies. Tabulation of projects according to the amounts of funds allocated, appears in Table 8.38, where 34% of projects were allocated with funds below \$1,000,000, another 30% were between \$1,000,000 to \$1,999,999 and 13% were between \$2,000,000 to \$2,999,999. All these make up a total of 77% of projects were with allocation of funds below \$3,000,000. The average allocation of funds per project for each five-year plan was: \$1,867,541 for 3MP; \$2,648,468 for 4MP; and, \$1,924,032 for the 5MP.

Table 8.38:

ALLOCATION OF FUNDS FOR PLCHP PROJECTS 1976-1990

Amount of Funds Allocation Approved Per Project	3MP	4MP	5MP	Total cases
Below \$1,000,000	60	10	3	73 (34.1%)
\$1,000,000 to \$1,999,999	12	43	9	64 (29.9%)
\$2,000,000 to \$2,999,999	7	19	2	28 (13%)
\$3,000,000 to \$3,999,999	6	13	2	21 (9.8%)
\$4,000,000 to \$4,999,999	1	4	1	6 (2.8%)
\$5,000,000 to \$5,999,999	0	6	1	7 (3.3%)
\$6,000,000 to \$6,999,999	1	3	0	4 (1.9%)
\$7,000,000 to \$7,999,999	1	3	0	4 (1.9%)
\$8,000,000 and above	4	3	0	7 (3.3%)
Total	92	103	18	214

Note: 1 missing cases

Source: Researcher's First Stage/Quantitative Data Collection

Table 8.39 provides information on the allocation of funds provided for PLCHP projects according to states and five-year plans. A higher amount of funds was allocated for 4MP while the 5MP had the lowest. During 5MP Selangor was not provided with allocation of funds, because no new projects were initiated in this state.

Table 8.39:

ALLOCATION OF FUNDS FOR 215 PLCHP PROJECTS 1976-1990

State	3MP	4MP	5MP
Johor	\$76,131,667	\$58,457,536	\$5,528,785
Negeri Sembilan	\$20,244,877	\$21,019,921	\$2,675,000
Pahang	\$14,676,500	\$39,581,281	\$8,460,000
Perak	\$10,094,025	\$31,926,400	\$3,120,000
Pulau Pinang	\$14,676,500	\$38,048,864	\$5,325,000
Selangor	\$25,292,218	\$64,149,400	-
Trengganu	\$11,808,000	\$22,257,281	\$9,523,800
Total	\$171,813,787	\$275,440,683	\$34,632,585

Source: Researcher's First Stage/Quantitative Data Collection

Allocation Per Dwelling.

Table 8.40 below provides information on allocation per dwelling. For the whole three five-year plans the mean was \$11,319 per unit with a standard deviation of \$5,209. The mean of allocation per unit increased as the five-year plan headed towards the 1990s. During 3MP the mean of allocation was \$8,137 per unit, then in 4MP it increased to \$13,526 per unit and finally to \$16,361 per unit during 5MP.

Table 8.40:

PROJECT'S ALLOCATION PER UNIT ACCORDING TO STATES AND FIVE-YEAR PLANS

State	3MP	4MP	5MP
Johor	\$9,598	\$17,721	\$16,690
Negeri Sembilan	\$8,001	\$13,724	\$18,865
Pahang	\$7,261	\$12,611	\$15,208
Perak	\$7,835	\$10,935	\$15,000
Pulau Pinang	\$9,970	\$20,314	\$14,812
Selangor	\$7,795	\$10,831	\$0
Trengganu	\$8,735	\$12,177	\$17,662
Total			
mean	\$8,137	\$13,256	\$16,361
<i>(standard deviation)</i>	<i>(\$2,090)</i>	<i>(\$4,953)</i>	<i>(\$7,878)</i>
number of cases	N=90	N=101	N=18

Note: missing cases = 6 or 2.8 per cent.

Source: Researcher's First Stage/Quantitative Data Collection

Loans Approved

Loan applications for public low-cost housing projects are submitted by state governments through the MHLG. The loan application process is finalised through signing agreements between states and federal government. The amount of loan approved by the federal government for projects in the seven states during the three five-year plans is exhibited in Table 8.41. When this Table 8.41 is compared with the earlier Table 8.39 we can see that the total amount of loan approved is generally higher than the total amount of funds allocated.

Table 8.41:

LOAN APPROVED ACCORDING TO STATES AND FIVE-YEAR PLANS

State	3MP	4MP	5MP
Johor	\$82,556,823	\$53,973,702	\$8,145,412
Negeri Sembilan	\$22,027,322	\$17,839,564	\$2,675,000
Pahang	\$18,611,578	\$33,904,283	\$10,410,000
Perak	\$11,427,031	\$29,956,672	\$2,093,800
Pulau Pinang	\$14,124,400	\$37,873,859	\$5,325,000
Selangor	\$26,366,117	\$68,318,686	0
Trengganu	\$17,545,409	\$33,461,691	\$9,558,895
Total	\$192,658,680	\$275,543,924	\$38,208,107

Source: Researcher's First Stage/Quantitative Data Collection

The amount of loan approved for projects per unit is shown in Table 8.42. The table shows that the amount of loan approved per unit in four states (Pahang, Perak, Pulau Pinang and Trengganu) for the 4MP projects is higher than the 3MP and 5MP projects.

Table 8.42:

APPROVED LOAN PER UNIT ACCORDING TO PLANS AND STATES

State	3MP	4MP	5MP
Johor	\$14,177	\$19,815	\$24,166
Negeri Sembilan	\$9,289	\$17,533	\$18,152
Pahang	\$11,943	\$22,351	\$15,000
Perak	\$9,627	\$16,960	\$10,263
Pulau Pinang	\$8,450	\$26,442	\$16,406
Selangor	\$8,909	\$17,545	0
Trengganu	\$11,073	\$20,551	\$23,954
Total mean <i>(standard deviation)</i> number of cases	\$10,335 <i>(\$4,364)</i> N = 89	\$19,388 <i>(\$5,525)</i> N = 78	\$18,152 <i>(\$7,349)</i> N = 14

Source: Researcher's First Stage/Quantitative Data Collection

Additional Loans

Inadequate loans approved for the project led to requests for additional loans by state governments to meet projects' financial requirements. Table 8.43 below shows that 60% projects utilised no additional loan while 30% required one additional loan, 8% required two more additional loans and 2% required three more additional loans.

Table 8.43:

ADDITIONAL LOANS APPROVED TO PLCHP'S PROJECTS 1976-1990

Number of Additional Loan Approved	3MP	4MP	5MP	Total <i>(Percentage)</i>
No Additional Loan	43	48	9	100 (60.2%)
One Additional Loan	23	24	3	50 (30.1%)
Two Additional Loan	12	2	0	14 (8.4%)
Three Additional Loan	2	0	0	2 (1.2%)
Total	80	74	12	166 (100%)

Source: Researcher's First Stage/Quantitative Data Collection

Construction cost

Project's construction costs incorporate all the costs incurred for earth work and site preparation, infrastructure and building, but exclude the land costs, water and electricity supply and other costs incurred during the completion stage. The mean of

construction cost per unit appears in Table 8.44. The mean of construction cost shows variations between plans and states with an increasing trend from the 3MP period to the 5MP period (except Pahang in 5MP). Comparing Table 8.44 with the previous Table 8.42, shows that the mean of loan approved per unit is lower than the mean of construction cost per unit in each plan and state. Therefore, state governments had to seek their own funding in meeting with the balance of this finance.

Table 8.44

AVERAGE PROJECT CONSTRUCTION COST BY STATES AND FIVE-YEAR PLANS

State	3MP	4MP	5MP
Johor	\$13,803	\$14,375	\$21,420
Negeri Sembilan	\$10,230	\$11,607	\$20,885
Pahang	\$10,783	\$20,109	\$14,981
Perak	\$9,404	\$16,578	\$23,334
Pulau Pinang	\$10,936	\$28,769	\$27,432
Selangor	\$11,534	\$17,158	-
Trengganu	\$11,613	\$18,832	\$21,945
Total			
mean	\$11,062	\$17,142	\$21,971
(standard deviation)	(\$4,145)	(\$6,048)	(\$5,876)
Number of cases			

Source: Researcher's First Stage/Quantitative Data Collection

TOTAL PROJECT COST

Total project cost incorporated all costs, including earth work and site preparation, infrastructure and building cost, land cost,⁽¹⁾ water and electricity supply and other costs incurred during the project implementation process. The mean total cost per unit is shown in Table 8.45. Comparison of Table 8.45 with the previous Table 8.40 and 8.42, shows that the mean total project per unit is higher than the mean of loan approved per unit and the mean of funds allocated per unit in every plan and states.

¹ Land cost was included in the total cost if payment made to it such as for compensation of compulsorily taking of private land. Land cost was not taken into the total cost if state land was used.

Table 8.45:

PROJECT'S TOTAL COST PER UNIT OF HOUSE BY STATES AND FIVE-YEAR PLANS

State	3MP	4MP	5MP
Johor	\$14,628	\$18,911	\$22,018
Negeri Sembilan	\$11,073	\$17,749	*
Pahang	\$13,007	\$25,539	\$16,750
Perak	\$10,500	\$18,271	\$23,334
Pulau Pinang	\$11,468	\$29,699	\$32,689
Selangor	\$13,513	\$19,725	-
Trengganu	\$12,394	\$22,312	\$23,730
Total			
mean	\$12,431	\$20,481	\$24,653
(standard deviation)	(\$4,586)	(\$6,326)	(\$7,330)
total cases	N=80	N=74	N=12

N = 166 cases.

Note:

* missing data for Negeri Sembilan because the calculation for the project's total cost was not yet finalised by the State Housing Department when fieldwork was carried out by this researcher.

Source: Researcher's First Stage/Quantitative Data Collection

Comparisons of Project Costs

The following Table 8.46 provides comparison (1) allocation of funds per unit; (2) project estimate per unit; (3) loan approved per unit; (4) construction cost per unit; and (5) total project cost per unit. This shows several patterns. First, the mean total cost per unit was higher than any other four means (with the exception of estimate per unit and cost per unit in 4MP). This implies that the funding provided by the federal government was lower than the total project cost in most cases. Consequently, state governments had to bear whatever differences there were between the total cost and the amount of loan provided. Second, the mean project estimates per unit were higher than the mean of funds allocated and the mean of loan approved per unit. This implies that projects were inadequately provided with sufficient financing right at the start. Third, the mean project estimate was lower than the mean total project cost for 3MP and 5MP, but not for the 4MP. A time lapse between when the estimate was made and the beginning of construction could be associated with this pattern. The time lapse between this two period was about 53.4 months (variable FORMBEGN) which could explain why the project estimate was no longer accurate. Finally, the mean of project costing and financing show an increasing trend from 3MP to 5MP. Delays in starting

the construction caused the project estimates were no longer valid and the result of inflation caused the project cost increased from 3MP to 5MP.

Table 8.46:

COMPARISON OF PROJECTS FUNDING AND COSTING BY PLANS

	3MP	4MP	5MP	Total Cases (<i>N</i> missing)
Allocation Per Unit				
<i>mean</i>	\$8,137	\$13,257	\$16,361	215
<i>standard deviation</i>	\$2,090	\$4,953	\$7,879	(6)
<i>cases</i>	(90)	(101)	(18)	
Estimate Per Unit				
<i>mean</i>	\$11,347	\$22,760	\$22,016	215
<i>standard deviation</i>	\$8,009	\$27,517	\$7,415	(31)
<i>cases</i>	(89)	(80)	(15)	
Loan Approved Per Unit				
<i>mean</i>	\$10,355	\$19,389	\$18,152	215
<i>standard deviation</i>	\$4,364	\$5,425	\$7,349	(34)
<i>cases</i>	(89)	(78)	(14)	
Construction Cost Per Unit				
<i>mean</i>	\$11,062	\$17,142	\$21,971	215
<i>standard deviation</i>	\$4,145	\$6,048	\$5,876	(52)
<i>cases</i>	(79)	(71)	(13)	
Total Project Cost Per Unit				
<i>mean</i>	\$12,432	\$20,482	\$24,653	215
<i>standard deviation</i>	\$4,586	\$6,327	\$7,331	(49)
<i>cases</i>	(80)	(74)	(12)	

N = 166 cases.

Note: Missing data in this table become larger because of the incomplete projects. This is due to the progress of incomplete project were varied and only a small number reached the construction stage.

Source: Researcher's First Stage/Quantitative Data Collection

Table 8.47 below shows comparisons between project estimate, construction cost and total costs by five-year plan and their completion status. This table reveals that in 3MP and 4MP, projects completed within five-year plan had lower construction cost and total costs than the estimated cost. However in 5MP, projects were underestimated their total costs. Also, in 3MP and 4MP, projects completed within the same plan had a smaller difference between the construction cost and total costs than

projects completed outside the five-year plan. This implied that, a large additional costs will be incurred if delays in completing the projects.

Table 8.47:
COMPARISONS OF PROJECT ESTIMATE, CONSTRUCTION COST AND
TOTAL COSTS BY FIVE-YEAR PLANS

Five-year Plan	Project's Estimate	COMPLETED WITHIN PLAN		COMPLETED OUTSIDE PLAN	
		Construction Cost	Total Costs	Construction Cost	Total Costs
3MP	\$11,347	\$8,045	\$8,718	\$12,543	\$14,088
4MP	\$22,760	\$16,309	\$18,945	\$17,690	\$21,321
5MP	\$22,016	\$25,000	\$32,000	\$21,631	\$23,412

Source: Researcher's First Stage/Quantitative Data Collection

Total Project Costs and Preparation Variables

The following Table 8.48 shows result of t-tests between preparation variables and the total project cost in nominal price. Three variables IDENTIFY, LANDREPT and SURVEY, show no significant different to the total project cost whether they were done before or after the project formulation. The other two variables EXTENT and SITECHG,⁽²⁾ also show no significant difference to the total project cost, whether extension of previous projects or any changes to project sites were made. Variable AMEND shows that projects without amendment have total projects cost per unit lower than projects involved with any amendments. This different is statistically significant because AMEND involved with major changes to projects such as with increased or decreased of project targets, amendment to the house type or relocation to another district, etc. (Refer to Table 8.34 earlier on modifications to projects).

² The difference between SITECHG and AMEND is where SITECHG involved the decision to change or relocate project site to nearby to the original proposal. Variable AMEND involved broader amendment to projects included relocation to another location within the same district or to another district. (See also Table 8.34).

Table 8.48:

T-TEST ON PREPARATION VARIABLES WITH TOTAL PROJECT COST
(in current price)

Variable		N of Cases	Mean	F-Value	Probability	Decision
IDENTIFY	Before	114	\$16,710	6.424	.012	Not Significant
	After	52	\$16,923			
LANDREPT	Before	58	\$17,884	5.842	.017	Not Significant
	After	108	\$16,182			
SURVEY	Before	36	\$17,791	7.644	.006	Not Significant
	After	130	\$16,496			
EXTEND	Yes	38	\$17,804	.279	.598	Not Significant
	No	128	\$16,413			
SITECHG	No	134	\$16,758	5.464	.021	Not Significant
	Yes	32	\$16,855			
AMEND	Yes	27	\$20,047	1.474	.227	Significant
	No	139	\$16,142			

Source: Researcher's First Stage/Quantitative Data Collection

Total Project Costs and Completion Time

Table 8.49 below shows comparisons of total project costs in current prices and completion time according to quartiles. Data analysis from this table produced three findings: (a) total project costs increased over time from 3MP to 5MP, (b) all the project costs classified by quartiles increased from 3MP to 5MP, and (c) projects formulated for 3MP and 4MP show increased in costs by quartiles that implied the longer to complete the project the higher the total costs. However, for 5MP, projects completed below the first quartile had the highest total costs.

Table 8.49:

**COST PER UNIT (CURRENT PRICE) BY QUARTILE OF COMPLETION TIME
ACCORDING TO FIVE-YEAR PLAN**

Quartile		3MP	4MP	5MP
Below First Quartile	Mean	\$8,466	\$18,474	\$32,000
	standard deviation	\$3,316	\$5,694	\$0
	cases	22	16	3
First Quartile	Mean	\$12,456	\$19,564	\$20,218
	standard deviation	\$3,864	\$8,072	\$4,866
	cases	19	20	2
Second Quartile	Mean	\$14,017	\$19,988	\$24,078
	standard deviation	\$3,479	\$6,735	\$1,657
	cases	22	17	2
Third Quartile	Mean	\$15,067	\$22,935	\$21,379
	standard deviation	\$4,154	\$3,601	\$9,471
	cases	17	20	5
Overall	Mean	\$12,431	\$20,481	\$24,653
	standard deviation	\$4,586	\$6,326	\$7,330
	cases	80	73	12

Notes: Missing cases = 1 out of 166 cases

Source: Researcher's First Stage/Quantitative Data Collection

Analyses on the total project costs confirmed that total project cost in current price increased over time during the period of study. This increased was related to the time, where delays in implementing projects involved with higher total project costs. It is also related to preparation, where the estimated costs not valid and additional costs incurred to the total costs.

COST PER UNIT ADJUSTED TO 1990'S PRICE

Table 8.50 below provides the mean cost per unit adjusted to 1990's price. The calculation of adjusted price is based on CPI's index and calculated for the year when the project was completed. During 3MP the mean adjusted cost per unit was at \$18,476 then for 4MP it increased to \$21,345 and finally in 5MP it increased to \$23,550. Comparing states and plans, Pulau Pinang has the highest mean of \$33,563 in

4MP and \$33,208 in 5MP. Perak has the lowest mean of \$13,540 in 3MP, followed by Negeri Sembilan with \$14,064 also in 3MP.

Table 8.50:

ADJUSTED COST PER UNIT ACCORDING TO PLAN AND STATE

(Based on 166 Completed Projects)

Plan	State	Mean	Std.Dev	Cases
Third Malaysia Plan	Johor	\$16,812	\$4,664	8
	N.Sembilan	\$14,064	\$2,953	11
	P.Pinang	\$14,899	\$3,086	6
	Pahang	\$15,854	\$6,425	14
	Perak	\$13,540	\$3,708	13
	Selangor	\$15,892	\$5,487	18
	Trengganu	\$15,592	\$5,345	9
	Total 3MP	\$18,476	\$6,803	79
	Fourth Malaysia Plan	Johor	\$19,312	\$3,560
N.Sembilan		\$19,125	\$5,514	9
Selangor		\$21,067	\$6,010	22
Perak		\$18,424	\$4,344	11
P.Pinang		\$33,563	\$7,918	4
Pahang		\$22,787	\$7,523	7
Trengganu		\$23,541	\$8,809	8
Total 4MP		\$21,345	\$6,800	70
Fifth Malaysia Plan		Johor	\$19,867	-
	N.Sembilan	-	-	0
	Selangor	-	-	0
	Perak	\$19,413	-	1
	P.Pinang	\$33,208	\$2,085	4
	Pahang	\$14,223	\$6,957	3
	Trengganu	\$22,121	\$765	2
	Total	\$23,550	\$8,824	11
All the three plans		\$18,476	\$6,803	160

Note: Missing: 55 cases or 25.6% where 49 cases (22.8%) because of incomplete projects

Source: Researcher's First Stage/Quantitative Data Collection

Table 8.51 below provides the mean cost per unit adjusted to 1990's price tabulation according to five-year plans and type of house constructed. The type of houses constructed is divided into four groups: (1) single and double storey terraced housing; (2) wooden house; (3) medium and high rise flats; and, (4) the mixed type. Table 8.51 shows that the mean adjusted cost per unit increased from 3MP to 5MP. During 3MP the wooden houses were more costly than the three other types of

housing. While the mean for three other types of housing showed only a small differences. During 4MP the mean of adjusted cost per unit for single and double storey terraced housing was higher than other types of housing. But during 5MP the mean for single and double storey terraced housing was lower than other types of housing.

Table 8.51:

ADJUSTED COST PER UNIT ACCORDING TO 1990'S PRICE FOR TYPE OF HOUSE AND FIVE-YEAR PLAN

Type of Houses \ Plan	3MP	4MP	5MP
Single and Double Storey Terraced Wooden Houses	\$15,004	\$20,024	\$20,647
Medium and High Rise Flats	\$20,457	-	-
Mixed type	\$15,291	\$18,932	\$34,377
	\$15,627	\$18,932	\$34,377

Source: Researcher's First Stage/Quantitative Data Collection

Table 8.52 below provides the mean of cost per unit adjusted to 1990's price according to five-year plans and the location of houses was constructed. There were three categories projects location: urban areas; urban fringes; and rural areas. During 3MP the mean adjusted house price for urban fringes was lower than urban and rural areas but in the 4MP and 5MP the mean adjusted cost for houses in rural areas was the lowest.

Table 8.52:

ADJUSTED COST PER UNIT ACCORDING TO LOCATION AND FIVE-YEAR PLAN

Location \ Plan	3MP	4MP	5MP
Urban areas	\$15,515	\$32,483	\$30,540
Urban fringes	\$13,805	\$22,279	-
Rural areas	\$15,573	\$19,586	\$17,752

Source: Researcher's First Stage/Quantitative Data Collection

Table 8.53 below highlights adjusted total cost per unit by the quartile of completion time. The table shows that, in 3MP the longer the time to complete the project the higher the real cost. Then for 4MP the first quartile was the lowest but cost fluctuated for other quartiles. In 5MP the shorter to complete the project the higher the adjusted total cost per unit. The table also shows that project real costs increase for each quartile and five-year plan e.g. projects completed below first quartile were M\$12,608 in 3MP, \$20,655 in 4MP and \$34,230 in 5MP.

Table 8.53:

ADJUSTED COST PER UNIT (REAL PRICE) BY QUARTILE OF COMPLETION TIME ACCORDING TO FIVE-YEAR PLAN

Quartile	3MP	4MP	5MP
Below First Quartile	\$12,608	\$20,655	\$34,230
Mean			
standard deviation	\$4,477	\$6,524	\$512
cases	22	16	3
First Quartile	\$15,470	\$21,834	\$22,612
Mean			
standard deviation	\$4,808	\$8,660	-
cases	19	20	2
Second Quartile	\$16,591	\$20,933	\$21,899
Mean			
standard deviation	\$4,075	\$7,482	-
cases	22	17	2
Third Quartile	\$16,430	\$21,863	\$18,634
Mean			
standard deviation	\$4,478	\$3,563	\$7,584
cases	17	20	5
Overall	\$15,228	\$21,388	\$23,550
Mean			
standard deviation	\$4,665	\$6,748	\$8,825
cases	80	74	11

Notes: Missing cases =1 out of 166

Source: Researcher's First Stage/Quantitative Data Collection

Total Adjusted Project Costs and Preparation Variables

Table 8.54 below shows results of t-test between preparation variables and the total project cost in real price. Five preparation variables (IDENTIFY, EXTEND, SITECHG, LANREPT and SURVEY) show no significant difference to adjusted total cost similar to the tests in Table 8.47 earlier. AMEND is the only variable with significant difference to the real price. Projects involved with amendments (\$21,194) incurred higher costs compare to projects without amendments (\$18,062) or about 17% higher than non-amended projects.

A crucial finding from the analysis of total project costs in nominal price and in real price confirmed that project costs rose over the period of study from 3MP to 5MP.

Table 8.54:
T-TEST ON PREPARATION VARIABLES WITH ADJUSTED TOTAL COST IN
1990'S PRICE
(real price)

Variable		N of Cases	Mean	F-Value	Probability	Decision
IDENTIFY	Before	114	\$18,642	4.805	.030	Not Significant
	After	52	\$18,419			
LANREPT	Before	58	\$19,720	6.455	.012	Not Significant
	After	108	\$17,953			
SURVEY	Yes	36	\$19,638	6.118	.014	Not Significant
	No	130	\$18,277			
EXTEND	Yes	38	\$19,169	.117	.73	Not Significant
	No	128	\$18,394			
SITECHG	No	134	\$18,614	3.534	.062	Not Significant
	Yes	32	\$18,395			
AMEND	Yes	27	\$21,194	1.335	.250	Significant
	No	139	\$18,062			

Source: Researcher's First Stage/Quantitative Data Collection

IMPLEMENTATION PERFORMANCE AND COST BY AGENCY

The length of time taken by the three implementation agencies from the project formulation stage to the beginning of construction (FORMBEGN), the completion stage (SPAN) and occupation of houses (FORMOCC) is presented in Table 8.55. The mean for variables FORMBEGN, SPAN and FORMOCC shows that they are different

between the three agencies where PWD has the shortest followed by SEDC and NHD has the longest mean. Statistical tests by the one-way ANOVA on variable FORMBEGN produces an F-ratio of 8.6972 and F-probability of .0003 which interprets as a significant difference of means between these agencies. Similarly variable SPAN and FORMOCC provide results showing that their means are significantly different at alpha .05.

Table 8.55:

LENGTH OF TIME OF IMPLEMENTATION PROCESS BY AGENCY AND
FIVE-YEAR PLAN

Location \ Plan	3MP (months)	4MP (months)	5MP (months)
From project formulation to construction (FORMBEGN)			
NHD	64.1	59.6	67.5
SEDC	57	52.8	73.3
PWD	44.6	26.2	32.9
From project formulation to completion stage (SPAN)			
NHD	87.2	85.8	100
SEDC	77.7	80.2	98.9
PWD	72.4	59.3	46.7
From project formulation to houses occupation (FORMOCC)			
NHD	91.7	92.6	104.5
SEDC	81.6	82.8	102.4
PWD	79.8	63.7	50.8

Source: Researcher's First Stage/Quantitative Data Collection

Comparison between agencies is made for project financing and costing, which appears in Table 8.56. The table shows a different amount of allocation, amount of loan approved and project costing between the three agencies. Projects assigned to PWD were allocated a highest amount allocation per unit. The SEDC estimated project cost were higher than the other two agencies, but projects under NHD had the highest amount of loan. PWD's projects had the highest construction cost per unit and similarly projects handled by this agency had the highest average total project costs per unit. Finally, as to the adjusted total project cost per unit based on 1990's price, PWD had the highest mean of \$20,853 followed by SEDC with \$18,235 while NHD was the lowest with \$17,346 per unit. Although these means were difference, statistical tests by

one-way ANOVA produced results that they were not statistically significant difference. For example the adjust cost to 1990's price produce an F-ratio of 2.5132 and F-probability of .0843 which interprets as no significant difference between the agencies at the alpha 0.05.

Table 8.56:

PROJECTS' FINANCING AND COSTING BY AGENCIES

Project Financing and Costing	NHD	SEDC	PWD
Project allocation per unit	\$11,750	\$10,725	\$12,190
Project estimate per unit	\$13,488	\$18,835	\$18,520
Project approved loan per unit	\$15,584	\$14,425	\$14,808
Project construction cost per unit	\$14,393	\$14,022	\$16,414
Project total cost per unit	\$16,439	\$16,582	\$18,543
Adjusted Cost to 1990's price	\$17,436	\$18,235	\$20,853

Source: Researcher's First Stage/Quantitative Data Collection

Table 8.57 below compares between project estimate, amount of loan approved and total costs according to the completion status by agencies and five-year plans. This table shows that: (a) NHD has the lowest estimates but was approved higher loans, whereas SEDC and PWD have higher estimates but were approved lower amount of loans; (b) loans approved would be adequate to cover total costs if projects completed within the same plan in many cases, but loans were inadequate if projects completed in other plans; (c) NHD has a lower total project costs than SEDC and PWD.

Thus, it can be summed as analyses of performance between agencies for project costing show variability between implementing agencies.

Table 8.57:
COMPARISONS BETWEEN ESTIMATES, LOAN APPROVED AND TOTAL
COSTS BY AGENCIES AND FIVE-YEAR PLANS

Agency\Plan	Project Estimate	Loan Approved	Completed Within Plan	Completed Outside Plan
NHD				
3MP	\$9,197	\$12,459	\$8,102	\$13,657
4MP	\$16,761	\$17,480	\$14,502	\$20,336
5MP	\$17,276	\$19,531	\$23,121	\$21,130
SEDC				
3MP	\$12,297	\$9,926	\$9,037	\$14,235
4MP	\$26,310	\$19,356	\$19,355	\$22,204
5MP	\$19,878	\$18,560	\$19,542	
PWD				
3MP	\$11,730	\$8,670	\$8,251	\$14,224
4MP	\$24,928	\$22,816	\$24,721	\$21,996
5MP	\$29,848	\$16,406	\$32,000	\$33,378

Source: Researcher's First Stage/Quantitative Data Collection

HOUSING TARGET

At the beginning of each five-year plan a target of the number of houses to be built project formulated. The aggregate of all projects at the beginning of each plan became the housing target for each state. Consequently the aggregate total of states' targets became the target of each five-year plan. The distribution of housing targets based on the number of newly formulated projects for each five-year plan is depicted in Table 8.58 below. The table highlights that the majority of housing projects were clustered around projects below 200 units. The total number of projects below 200 units is 160 out of 215 total projects or 74%. This indicates that the majority the PLCHP projects were small. Only 8 projects (3.7%) were above 500 units. The smallest project in this programme was 13 houses while the largest aimed for 2,016 houses. The mean for the overall targeted unit was 197, the mode was 100 and the median was 120 houses.

Table 8.58:

HOUSING TARGET: PROJECTS' SIZE ACCORDING TO FIVE-YEAR PLANS

Number of houses per project	3MP (1976-80)	4MP (1981-85)	5MP (1986-90)	Total
50 and less	23	7	3	33
51 to 100	28	24	8	60
101 to 150	19	22	4	45
151 to 200	5	16	1	22
201 to 250	2	10	1	13
251 to 300	4	7	1	12
301 to 350	0	3	0	3
351 to 400	3	7	0	10
401 to 450	2	4	0	6
451 to 500	0	3	0	3
more than 500	6	2	0	8
Total	92	105	18	215

Source: Researcher's First Stage/Quantitative Data Collection

As shown in Table 8.59 the number of houses approved by the TCOHL was lower than the target set at the beginning of each five-year plan. Furthermore the number of houses built were also lower than the approved figure. As a result in most of the five-year plans there was a shortfall of housing target.

Table 8.59:

THE NUMBER OF HOUSES TARGETED, APPROVED AND BUILT

(based on 215 projects)

Plan & State	Number of Houses Targeted	Number of Houses Approved	Number of Houses Built	Target Shortfalls
3MP (1976-1980)				
Johor	7,531	5,887	5,128	2,403 (31.9%)
Negeri Sembilan	2,423	2,260	1,379	1,044 (43%)
Selangor	3,382	3,251	2,862	520 (15.3%)
Perak	1,178	1,191	1,161	17 (1.4%)
Pulau Pinang	1,503	1,503	1,405	98 (6.5)
Pahang	1,891	1,853	1,538	353 (18.7%)
Trengganu	1,377	1,405	1,392	+15 (1.1%)
Total	19,225	17,350	14,865	4,360 (22.7%)
4MP (1980-1985)				
Johor	3,588	2,788	2,295	1,293 (36%)
Negeri Sembilan	1,600	1,450	1,000	600 (37.5)
Selangor	5,990	4,628	4,019	1,971 (32.9)
Perak	2,946	2,737	1,788	1,158 (39.3)
Pulau Pinang	1,840	1,780	1,362	478 (26%)
Pahang	3,121	2,608	1,405	1,716 (55%)
Trengganu	1,938	1,862	1,267	671 (34.6%)
Total	21,032	17,853	13,156	7,876 (37.4%)
5MP (1986-1990)				
Johor	343	341	337	6 (1.7%)
Negeri Sembilan	150	150	100	50 (33.3%)
Selangor	0	0	0	0
Perak	204	204	204	0
Pulau Pinang	263	235	235	28 (10.6%)
Pahang	546	534	534	12 (2.2%)
Trengganu	553	339	247	306 (55.3%)
Total	2,059	1,803	1,657	402 (19.5%)
GRAND TOTAL	42,316	37,006	29,723	13,593 (32.1%)

Source: Researcher's First Stage/Quantitative Data Collection

Table 8.60 below demonstrates that the number of projects completed was mostly lower than the approved number by the TCOHL and also lower than the number of projects targeted at the beginning of each five-year plan.

Table 8.60:

**THE NUMBER OF PUBLIC HOUSING PROJECTS TARGETED, APPROVED
AND BUILT**

Plan & State	Number of Projects Targeted	Number of Projects Approved	Number of Projects Built	Projects Shortfalls
3MP (1976-1990)				
Johor	10	8	8	2 (20%)
Negeri Sembilan	14	14	11	3 (21.4%)
Selangor	19	19	18	1 (5.3%)
Perak	15	15	14	1 (6.7%)
Pulau Pinang	6	6	6	0 (0%)
Pahang	18	18	14	4 (22.2%)
Trengganu	10	10	9	1 (10%)
Total	92	90	80	12 (13%)
4MP (1980-1985)				
Johor	12	11	10	2 (16.7%)
Negeri Sembilan	14	13	10	4 (28.6%)
Selangor	30	23	22	8 (26.7)
Perak	17	16	12	5 (29.4)
Pulau Pinang	9	9	7	2 (22.2%)
Pahang	12	10	6	6 (50%)
Trengganu	11	11	8	3 (27.3%)
Total	105	93	75	30 (28.6%)
5MP (1986-1990)				
Johor	2	2	2	0 (0%)
Negeri Sembilan	2	2	1	1 (50%)
Selangor	0	0	0	0 (0%)
Perak	1	1	1	0 (0%)
Pulau Pinang	4	4	4	0 (0%)
Pahang	4	4	3	1 (25%)
Trengganu	5	3	2	3 (60%)
Total	18	16	13	5 (27.8%)
GRAND TOTAL	215	199	168	47 (21.9%)

Source: Researcher's First Stage/Quantitative Data Collection

CONCLUSION

There are four important results produced by the data analysis in this chapter: (a) comparison of the time taken in the implementation stages by five-year plans, states and implementing agencies (b) confirmation of the targets' under-achievement, (c) the relationship between programme preparation and programme performance, and (d) comparison of the amount of funding provided for five-year plans, states and implementing agencies. These findings are related to the prediction that the shortfall of the public housing programme performance is partly because of the inadequacy of preparation of the scheme at the formulation and planning stage, that in itself may be affected by the planning period, states and implementing agencies. These results have implications for the formulated hypotheses as further clarified in the following paragraphs.

First, data analysis on the time taken for the implementation stages from programme formulation until occupation confirmed that there was no significant difference between the five-year plans. This implied that the programme was not improving over the three five-year plans between 1976 and 1990. This confirmed that the time spent on the implementation process was still the same in each plan despite intent and measures to expedite the process. However, when comparing states and implementing agencies, there were significant differences. For comparison between the states: Negeri Sembilan had the shortest planning stage and construction stage; Trengganu had the shortest resourcing stage, and: Pahang had the shortest completion stage.⁽⁷⁾ Similarly, comparison between agencies found that there was a significant difference in the time for commencing construction, achieving building completion and achieving the occupation stage. This suggests that the implementation performance of PLCHP is the result of relationships between the time involved in the implementation process, the states and the implementing agencies assigned to help state governments, but not the five year plans.

Second, the analysis confirmed the programme's under-achievement in each of the five-year plans where out of 624 projects only 28% were completed within the intended five-year plan. An analysis was made where a large number of projects (73%) took more than five years to complete and a large number of projects (66%) were also completed outside the intended plan. However, data analysis by chi-square test revealed that there was neither association between the five-year plan periods and successful project completion within those five years, nor with projects completed between the same plan or outside the intended plan. In addition, the analysis has shown

that the number of houses brought for approval by TCOHL was lower than the number targeted. Finally the number of houses built was even lower (see Table 8.59 and 8.60). This target shortfall occurred despite the fixing of targets in each plan, determining from both the “bottom-up” and with the approval from the “top-down”.

Third, data analysis also suggests that there is relationship between programme preparation and programme performance. This implies that poor performance was partly associated with inadequacy of preparation at the scheme’s formulation and planning stage. This gives an early indication on the statement “...that projects where some preparations have been made before the formulation stage have shorter completion times than projects where preparations are made during the formulation stage”. Furthermore, it was found that the formulation and planning stage was the longest amongst the implementation stages

Finally, data analysis also showed that the amount of funds provided by the federal government for the public low-cost housing programme varied between five-year plans and between states. Also the amount of funds provided by the federal government for the public low-cost housing programme was lower than the total project cost. In other words projects were inadequately provided with sufficient financing and as a result, the states had to meet this shortage of funds from their own. The analysis on the total project costs suggests there was a relationship between the increased in total project cost and the length of time taken for project completion where the longer the time taken for project completion, the higher the total project costs. When delays in implementation occurred, the project estimate was no longer valid because of the gap in time lapse and as a consequence of inflation. Therefore for a number of projects the total cost was more than the original estimated cost.

In contrast to the quantitative data analyses in this chapter, the next Chapter Nine presents qualitative data analysis from the perspectives of persons who were involved in the programme along with detailed investigation at the scheme level.

Endnotes

- ¹ Only two projects were still under construction and have almost reached the stage of completion on 1.6.94. The other 150 projects were incompleting because they were cancelled, postponed indefinitely and their funds were transferred to other projects.
- ² Reasons for projects cancellation derived from the survey result showed that: indecisiveness about the project (5 projects); indefinite postponement (3 projects), reconsideration as non priority projects (11 projects); re-routing of funds for higher priority projects (8 projects); poor response from buyers (2 projects); poor technical and financial viability (12 projects), and political reasons (2 projects).
- ³ Some of these projects are now included in the local authorities areas because the expansion of local authorities areas.
- ⁴ The state land belongs to the state governments. Although utilisation of state land requires certain procedures and formalities, their approvals are can normally be arranged with related government agencies. In general it can be assumed that the land would readily be available if it did not involve illegal squatters.
- ⁵ Note on ANOVA: within-groups mean square is based on how much the observations within each of the groups vary among themselves. The between groups mean square is based on how much the group means vary among themselves. If the null hypothesis is true, the two numbers should be close to each other. If we divide one by the other the ratio should be close to one. The statistical test for the null hypothesis that all of the groups have the same mean in population is based on computing such ratio. If the value F-prob printed as .0000 you reject null hypothesis that the mean between the group is the same. Refer Marija Norusis(1986), The SPSS Guide to Data Analysis, SPSS Inc. Chicago page 262
- ⁶ On the assumption that the programme formulation, preparation and planning in each of the five year plan starts about 6 months earlier than the beginning of 3MP in 1976, 4MP in 1981 and 5MP in 1986.
- ⁷ Negeri Sembilan required sites to be identified and land reports to be produced before the formulation stage which helped to shorten these two stages despite the problems faced by its two projects at the planning (Upper Canal) and construction stages (Risefield project) which are discussed in the following Chapter 9. Pahang produced comprehensive and clear guidelines to be followed by everyone involved in the completion stage, especially criteria for occupant selection and guidelines on the roles and responsibility of Committee members in the occupants selection process. Trengganu provided details of project costing and frequent communication with the central agencies for obtaining funding.

Chapter Nine

QUALITATIVE DATA ANALYSIS

Summary of Findings

The main findings of this chapter are:-

- The qualitative data confirms that delays occurred at every stages of project implementation with longer and more frequent delays during the formulation and planning stages.
- Implementation problems occurred at the formulation and planning stage because of vague guidelines and criteria for proposing projects, the inadequate time provided when proposing project, the inadequate preparation time, inability to identify sites, delays in making decisions about site selection and findings sites had problems, such as being occupied by squatters.
- Fast projects experienced fewer problems and were completed within the intended plan period. Average moving projects were affected by implementation problems, but slow projects surrounded by many problems and were carried over to next plan. Uncompleted projects were affected by so many problems at the formulation and planning stage that they were cancelled.
- Delays also caused an increase in project costs where a number of schemes cost more than the amount of loan provided due to increase in construction land costs resulting from inadequate preparation and also inflation during the delay. The government's funding arrangements were slow to adapt to these problems. Delays in commencing construction made project estimates problems valid and, as a result states requested a higher loans or made their own funding arrangements.
- Inadequate preparation and proposals made in the hurry caused projects faced with problems at the planning stage.
- Federal agencies were inclined to approve lower loans than the amounts requested.
- Although the construction stage had fewer delays and problems than other stages, the success of the programme was dependent on the selection of capable building contractors. Four factors caused delays (a) incompetent contractors (b) delays in evicting squatters and delays in making payments to contractors and project amendments, (c) technical departments and utility agencies, requiring projects to be

amended to suit additional requirements they imposed, and; (d) external factors, such as the economy and weather.

- Two main problems were faced during the completion stage: difficulties in obtaining certificates of fitness and delays in selecting occupants. Delays in making decision about occupants arose because of (a) applicants exceeded the number of houses built, (b) majority of applicants had similar backgrounds and, (c) the selection process involved politicians.
- There were problems of inter-agency relationships including strained relationships between the state and federal governments especially the issue of loan withdrawals; projects also had to conform to other agencies requirements.

Introduction

This chapter presents an analysis of the qualitative data from the in-depth interviews with officials involved in twenty-four projects in three states. The aim is to elucidate what happened to the projects from those who were closely involved with them. Detailed descriptions of what happened to the four categories of projects selected (uncompleted, slow, average and fast projects) help to understand the process of project implementation more clearly .

This chapter consist of six sections. First, it has a brief background on data collection, methods and steps in data analysis. Second, it describes programme preparation and the planning stage (project identification, site selection, land, programme formulation). Third, describes what happened to projects during the resourcing stage (project allocation, loan approval, project cost, loan withdrawals). Fourth, there is a discussion about what was happening during the project construction. Fifth, the description about project completion focuses on: the occupant selection process and certificates of fitness for occupation. Sixth and finally, a concluding section provides a summary and interpretation.

PROJECT SELECTION

The qualitative data analysis in this chapter is based on detailed descriptions of twenty-four projects initiated in three states (Perak, Selangor and Negeri Sembilan) during the three five-year plans between 1976 and 1990. The justifications and selection process for these projects have been discussed in Chapter 7 on the research methodology. For the purpose anonymity, these projects are identified with fictitious

names, as shown in Table 9.1 below. This table also provides information on projects' locations, planning periods, implementing agencies, performance categories and level of information obtained. There are four performance categories assigned to these projects: uncompleted projects; slow projects; average projects, and; fast projects.

Table 9.1:
SUMMARY OF PROJECTS INVESTIGATED FOR A DETAILED STUDY
UNDER THE QUALITATIVE DATA COLLECTION

Project's Name	State	Five Year Plan	Agency	Time Taken to Complete Project (Months)	Performance Category	Level of Information Obtained
1. Muddy Canal	Ng.Sembilan	4MP	SEDC		Uncompleted	Full
2. Lancott 2	Perak	4MP	NHD		Uncompleted	Partial
3. Black River	Selangor	4MP	SEDC		Uncompleted	Full
4. Broken Mound	Perak	4MP	NHD		Uncompleted	Partial
5. Three Mile Thorns	Selangor	4MP	NHD		Uncompleted	Full
6. Bamboo Splinters	Selangor	4MP	SEDC		Uncompleted	Full
7. Risefield	Ng.Sembilan	4MP	SEDC	147	Slow Project	Full
8. Trunkville	Selangor	3MP	SEDC	162	Slow Project	Full
9. Gingling	Ng.Sembilan	3MP	NHD	115	Slow Project	Full
10. Swampy Village	Ng.Sembilan	3MP	NHD	116	Slow Project	Full
11. Blind Pheasant Scheme	Selangor	4MP	NHD	133	Slow Project	Partial
12. Pumpkinville	Ng.Sembilan	5MP	SEDC	77	Average Project	Full
13. Hotville	Ng.Sembilan	3MP	SEDC	74	Average Project	Full
14. Lakesland Village	Selangor	3MP	SEDC	98	Average Project	Full
15. Whiteville	Perak	4MP	NHD	92	Average Project	Full
16. Barkings	Perak	4MP	NHD	66	Average Project	Full
17. Coralville	Selangor	4MP	NHD	74	Average Project	Full
18. Stony River Housing	Selangor	4MP	SEDC	80	Average Project	Full
19. Golden Hope	Selangor	4MP	SEDC	82	Average Project	Partial
20. Ficuswoods Resettlement	Selangor	4MP	SEDC	92	Average Project	Full
21. Lumber Junction	Selangor	4MP	PWD	60	Fast Project	Full
22. Knee Lie	Ng.Sembilan	3MP	NHD	51	Fast Project	Full
23. Manor	Perak	4MP	NHD	59	Fast Project	Full
24. Long Sand	Ng.Sembilan	4MP	SEDC	42	Fast Project	Full

Source: Researcher's Qualitative Data Collection 1994

The respondents

The approach adopted for the second stage data collection was by in-depth interviews with 25 respondents. Each of these respondents was involved in a number of projects the whole programme, ranging between two and 20 years. They were (1)

programme administrators who served the central agencies, (2) programme administrators who worked in the state housing divisions, and (3) a range of personnel at the implementing agencies level. They were intensively interviewed concerning their knowledge and experience of the selected 24 projects.

Restricted by a shorter time-scale for fieldwork during this second stage and also by limited resources, a strategy was devised which targeted interviews with 10 key respondents for 12 priority projects first. However the researcher later managed to conduct interviews with 25 respondents and obtained almost a complete picture of 20 projects. Interviews ranged between one and five hours and two interview sessions were held with some respondents. This was dependent upon factors like their length of experience with the programme, the number of projects they were involved with and if put forward additional information and opinions about improving the programme.

All the interviews were conducted at the respondents' offices. Interviews were guided by the interview questionnaires which were prepared in advance. Interviews were tape recorded and transcribed for analysis.

The interview focus

An interview guide was prepared to answer research question, hypotheses and also to gain further explanation on the findings of the quantitative data analysis carried during the first stage of data collection. The main focus of the interviews was on programme preparation and project formulation, allocation of resources, project construction, project hand over and selection of occupants, inter-agency relationships, implementation processes and structures, lessons learned from the projects and opinions on how to improve the programme.

Interviews were largely conducted in Bahasa Malaysia (Malay language) and then notes were prepared and translated directly into English. As a result of this process, excerpt of interviews cited in this chapter have lost their colloquial style although the writer has tried to turn these excerpts as accurately as possible into colloquial English.

Method of analysis

The purpose collecting of qualitative data is to produce answers to research question such "*...why was there unsatisfactory performance in implementing the*

public low cost housing programme in several five-year development plans?" Interviews were held with people who were involved in programme and aimed at obtaining first hand information, experiences, and opinions. The challenge for the researcher was to present respondents' responses in a convincing fashion which integrates the great variety of experiences. Transcribing of taped interviews resulted in massive piles of data. The fundamental task of the researcher is to reduce the data, analyse it and to draw conclusions. Patton has pointed out that:-

"The challenge is to make sense of massive amounts of data, reduce the volume of information, identify significant patterns, and construct a framework for communicating the essence of what the data reveals."
(Patton, 1990; pp.372-373)

The major purpose of the analysis is to organise respondents' responses in such a way that overall implementation process patterns would become clear. Several activities are involved in the qualitative inquiry: analysis, interpretation, and presentation of findings (Patton, 1990; pp.372-373.)

Steps in Data Analysis

The following approach was adopted for data analysis:-

(1) **Data reduction:** by reducing the large amount of data into a smaller number of analytic (synthesising) statements. This was done by reading the transcribed notes and assigning information into a pre-determined coding, making marginal notes, cross referencing and synthesising paragraphs into shorter sentences.

(2) **Data transfer:** a large and lengthy "cross-site meta-matrix" table was prepared and synthesised data was transferred into it. Synthesised information was categorised according to variables which were developed earlier in relation to the implementation process of the public low cost housing programme, from inception to completion. While doing the synthesising, coding and assigning of information into the categories, several new variables and sub-variables were also created. The aim is to observe trends, grouping and clustering among variables and also discover issues which occurred more frequently and which responses deviated from the usual answers.

The *cross-site matrix* is a table which displays synthesised information based on responses by identifying each particular selected project. The information was

assigned into the pre-determined variables. As Miles and Huberman (1984) point out:-

“...one of the first tasks in moving from a single-site to a cross-site analysis is determining how many sites share similar characteristics. In the simplest form, the analyst takes the original matrix for the single-site cases and tries to generate a cross-site matrix that gets all the data in.”

(Miles & Huberman, 1984;p.158)

Steps involved in preparation of the cross-site matrix are as follows:-

- i. Prepare the single site analysis matrix display.
- ii. Prepare a ‘cross-site analysis’ matrix display. Try to get all the synthesised data into a cross-site matrix. Identify any characteristics that appeared more than once in each of the cross-site displays and note them.
- iii. Group all the sites that look promising- this will help us to understand the structure of data, across all sites.

(3) **Data analysis;** by studying this meta-matrix table the researcher attempts to search for patterns, build cognitive maps, and look for ‘metaphor’, ‘grouping’ or ‘clustering of data’. Data analysis is an exercise in generating meaning from the data displays. For example, counting occurrences of events, activities or responses for particular projects, respondents or planning periods. For example, land problems were often identified as one of the constraints of project implementation; the researcher counted how many projects encountered squatter problems and how many respondents mentioned or discussed this problem. In addition the researcher also counted how many projects suffered from squatter problems in each of the three ‘five year plans’. By doing this the extent of land problems on the programme can be discovered as well as the extent to which sites for projects become more difficult and scarce as the programme progressed from one five year plan to the next.

Data analysis is designed for data reduction and pattern finding. Miles and Huberman (1984) suggested twelve tactics for generating meaning from data displays. They are:-

- (1) **counting** the occurrence or seeing what is in the matrix.
- (2) **noting patterns and themes** such as “repeatable regularities”

and “pattern codes”.

(3) seeing *plausibility*, drawing meaning based on feeling, sensing and belief.

(4) *clustering*, a method of grouping characteristics into certain categories.

(5) making ‘*metaphors*’, by judging characteristics which appear in the matrix that are related to or bear resemblance to certain groupings.

(6) *splitting variables*, by developing additional variables.

(7) *subsuming particulars in the general*, a tactic to generalise characteristics in the display.

(8) *factoring*, by factoring into smaller unobserved, usually hypothetical variables.

(9) *noting relations between variables*.

(10) *finding intervening variables*.

(11) *building a logical chain of evidence*, and

(12) *making conceptual/theoretical coherence*.

The researcher also summarised each project’s strengths and weaknesses, factors causing delays and factors contributing to the success of projects. These factors are compared between projects with the aim of generalising common experiences.

(4) *Interpretation of data*; is the next stage after the data has been analysed. Interpretation of data leads to finding and confirming conclusions. Qualitative data significance is based on logical interpretation, creativity and seeing the ‘plausibility’ of what feels right. It is an art of understanding data, interpreting, analysing and reaching conclusions.⁽¹⁾ Unlike quantitative data analysis, where there existed specific rules and formula for data significance. Patton, notes that:-

There are no formulas for determining significance. There are no ways of perfectly replicating the researcher’s analytical thought processes. There are no straightforward tests for reliability and validity. In short, there are no absolute rules except to do the very best with your full intellect to fairly represent the data and communicate what the data reveal given the purpose of the study (Patton, 1990;p372)

(5) **Linking qualitative and quantitative findings.** The final stage of data analysis is to compare the quantitative analysis with the qualitative analysis and to detect linkages between the two. That is to discover what sort of questions were answered by the two approaches and what conclusions can be made. For example if the statistical test of the quantitative data analysis confirmed that projects with sites,

identified before the formulation stage had shorter time spans (mean 67.9 months) when compared with other projects whose sites were identified after the formulation stage. The qualitative data provides further explanations of this e.g. vague guidelines, and rushing deadlines, projects were carefully prepared or prepared by junior staff and not checked senior officers, and projects submitted in the belief that they could be rectified later.

The approach adopted in data analysis is to compare and contrast between the 24 projects selected in this detailed study. The aim is to find out if certain patterns existed among the various categories of projects: uncompleted projects, slow projects, average projects and fast projects. In addition, comparisons are to be made between projects which complied with cost limits, projects which violated cost limit, and those which achieved their targeted number of houses.

PROGRAMME PREPARATION

Issues covered under this section include project formulation, site identification, site selection, land matters, project guidelines and inter-agency relationships. Data collection and analysis for this stage attempted to answer questions like "Was any preparation been made for the programme?", "what sort of preparation was made?" and "how far did the programme preparation vary between the three five year plans and between states?" Those questions are to detect, if meaningful linkages existed between the programme preparation and programme performance in relation to the prediction that project preparation has a significant relationship with programme performance.

Respondents were asked to describe "*.. the process of a project submission from the beginning until it reached acceptance as an approved project for the five year plan?*" The following are excerpt of actions and comments regarding projects submission for the five-year plans:-

"Project proposal was prepared in accordance with the general call circular issued by EPU, but it was a general circular for all public development projects before the starting of each five year plan." [Ras]

"When received the directive from the Ministry,... the state's housing division then instructed district and land offices [at the district level] to put up the list of propose low-cost housing projects for the district... some districts also

included projects which they had already proposed in the past plans which they were tuned down before due to the allocation constraints or decided by the state as not a priority project... A list of projects for the state then compiled and forwarded to the Ministry.” [Kas]

“When we received proposal from states, we conducted projects evaluation... we went on the ground to states and visits sites if they were available. Ideally, visits must be before we prepare recommendations for the five-year plan’s budget... but sometimes we made visit after this stage. We accepted and recommended for the five-year plan the ‘non-suspect’ and the clear cut cases put forward by the states. We gave the states opportunity to amend the project list before we finalised our recommended projects to EPU.” [Halo]

The process of projects formulation begins with the issuing of a ‘call circular’ by the Economic Planning Unit of the Prime Minister’s Department (EPU) before the beginning of any five year plan. Irrespective of the performance categories of projects, whether they were uncompleted, average, slow or fast projects, all underwent the same formulation process. In general there were no major significant differences between all categories of projects in relations to the process undertaken from the submission to the acceptance stage.

Although most of projects were formulated at the beginning of the five-year plan, several projects were added later which were formulated during the middle of the five-year plan. To strengthen the five-year plan, a revision was carried out after the second year of each plan. The implementation of the plan would be revised and assessed in terms of physical progress, financial capability and also revisions to the approaches and policies. The aim was to strengthen the plan. During this review process, new projects were formulated and added to the list of existing projects in the five-year plan as the consequences of increased budget allocations. Therefore, there were slight differences amongst the twenty four projects selected for the in-depth study; although most of the projects were formulated at the beginning of each five-year development plan, two of the projects were formulated during a mid-term review.

In normal circumstances, when new projects were approved they would be implemented in that very plan; but two of the projects in Negeri Sembilan, although approved during the 3MP Review, were assigned as 4MP projects. These projects were presented for consideration by the central agencies. However they were considered too late for the mid-term review projects of 3MP. These projects enjoyed the advantage of possessing a longer time to plan besides being guaranteed a financial allocation by the Estimate Sub-Committee of NDPC.⁽²⁾

When the Ministry received the call circular, it wrote letters and forwarded the same call circular to the State Housing Divisions (SHD) in each of the State Secretariats. The Ministry requested SHDs to submit a list of public low cost housing projects for the state be returned to the Ministry by a certain dateline. The programme administrator at the State Housing Division, then forwarded the call circular to all of the District Offices requesting them to submit public low cost housing projects for their districts. Once proposals from district offices were compiled, the SHD referred them to the state's housing committee for consideration. Next, the proposals were forwarded to the State's Executive Committee (Exco) for further scrutiny.

The list of projects from the states were later forwarded to the Ministry. At this stage, the Ministry compiled a list of the public low cost housing projects proposed for the plan. The Ministry assessed all the projects received. Assessments were based on criteria such as the plan's underlying approach, the states' past performance, the size of projects, the cost estimates, and sites either identified or available. After that the Ministry made further recommendation to the EPU. One of the programme administrators explained that:-

“After the state assessed the list proposed by the districts and matching with the states' needs, they [the states] forwarded their proposals to us [MHLG]. After evaluating these projects' viability, the states' capability and readiness in implementing them, then we proposed and made recommendation to EPU”
[Zaky]

The assessment of projects by the EPU was based on recommendations put forward by the Ministry, but was also dictated by the amount of funding allocated for the housing sector and the distribution of funding for each state.

The next stage was for the EPU to present the projects proposed to the Estimate Sub-Committee of the National Development Planning Committee (NDPC). This sub-committee was responsible for the application of annual and five year project allocations. The subsequent process was to go through the National Development Planning Committee (NDPC). NDPC deals with programme formulation and detailed considerations of projects. This committee then made a recommendation to the cabinet. After the cabinet had made a decision, the housing programme together with other programmes were finally presented for the approval of Parliament.

After the programme was approved by the Parliament, once again an assessment was made of the list of projects proposed by the states. The states had to provide details to central agencies which included the Ministry, EPU, the Treasury and the Implementation and Co-ordination Unit. Only then was the list of projects together with recommended allocation finally approved for the states. The process illustrated here seems lengthy and explains why the states learned about the approved project list for the five year plan only about between six months and one year after the five year plan began.

PROJECT IDENTIFICATIONS

Respondents for each project were asked the questions “*Which organisation identified this project?*” and “*When was the project identified?*” The following describes the project identification process.

When the call circular and instruction from the SHD was received by the District Offices a list of projects was then prepared as requested. Since the call circular provided only general guidelines for the project proposal, additional clarification was given in a covering letter from the SHD. The letter emphasised such criteria as the location of projects, the status of the land intended, the availability of ‘off-site infrastructure’³, the estimated cost, the size of the project and the type of house proposed. In relation to this, one of the respondents explained:-

“Little preparation and planning work were done for the proposed housing projects because little guidance provided besides too general criteria were set. Initiative on project proposal was entirely left to the district officer and his assistants to use their best discretion to decide whatever suitable criteria, technical matters and assessment on housing demand. The identification of project site was left to the decision of district officers (D.O) because we believed that the D.Os knew better what to plan for their districts...” [Baker]

Due to shortage of time, the project list was prepared in a hurry. The proposed project list consisted of newly proposed projects as well as some past projects which had been turned down, cancelled or were not considered during the past five year plans. At this stage site identification for some of these projects had not been made, while some had, especially those projects which had been cancelled in the past plans. One of the respondents explained:-

“For the projects submission, only one month was given [to the state governments] to come up with list of projects to the Ministry....the states in turn were dependent on district and land offices which were given two weeks for the proposals... Just Imagine what quality of a proposal can be expected within this two weeks time period? As a result, projects were not adequately prepared and dependent entirely to what ever sites proposed by tracers or settlement officers at the land office.” [Ras]

Uncompleted Projects

Sites for all the six uncompleted projects were never identified at this stage but were identified later after the project approved for the respective five year plans. In contrast some completed projects, some were identified during the project formulation, while others were identified after the project had been approved for the particular five year plan.

Slow Projects

Only three out of five slow projects had identified their sites when these projects were proposed to the state and federal government. The sites for two slow projects (Gingling and Risefield) were not identified because they were not in the list of priority projects for the state at the early stage of 3MP.

Although sites were identified projects, they could be subjected to changes, as demonstrated by one of the slow projects (Trunkville project). This Trunkville project had been planned since 2MP in 1971. However, due to indecisiveness in deciding the priority of projects in the state, this project was indefinitely postponed. Later the project was approved for the 3MP and completed in early 6MP. The site for the project was to be located adjacent to the previous two phases. Later the state requested the Federal Government to reconsider the implementation of this project. Limited by the allocation of funds, the central agencies requested the state to cancel other less important projects to accommodate the transfer of allocation for the Trunkville project. In a meeting with the central agencies, the state representative was unable to confirm which projects would be replaced by this project. Only about two months later the state confirmed that three projects would be dropped from the state's approved project list and would be replaced by the Trunkville project.

Indecisiveness about the priority of the project, together with the site issue forced this project to be carried over into the next plan. Early during the next plan (4MP) a decision was made by the programme administrator and the district officer to

modify the manner in which the project was to be implemented. They agreed that only 100 houses were to be built adjacent to the phase 1 and the other 100 houses in another location nearby. However, until its eighth year of project formulation there was no firm decision made on the issue of where to locate the project. Up to a certain point it was proposed that this project be cancelled. Finally a concluding decision was made when a site was selected. This site was capable of accommodating a total of 178 houses instead of the 200 houses intended. Soon afterwards earthwork for the construction of houses on the site began. This project illustrates how indecisiveness and an inability to make a firm decision about the site lengthened the time required for the project.

Average Projects

Six out of nine average projects had identified their site at this formulation stage. Three projects (Knee Lie, Hotville and Pumpkinville) in Negeri Sembilan during the 3MP identified their sites after the projects had been approved for the five year plan. In fact Hotville project was not in the original list of priority projects. In contrast to the Pumpkinville project which was initiated in 5MP, its site had been identified and the land report was made available to SHD one year prior to the formulation stage.

Fast Projects

Three out of four fast projects had identified their sites in the list submitted to the state and federal government. Knee Lie and Manor 3 projects were parts of extension projects from the previous phase. The site for Lumber Junction was proposed and identified as site for a public low-cost housing by the district and land office. Only Long Sand project was not identified the site at this stage, however the respondent explained that:-

“[Although] site was not identified at the proposal stage [but] decision of site selection was made soon later on a state land, adjacent to a road frontage with water and electricity supply... The land office provide a land report and prepare an index plan showed the location of the proposed site to SEDC [.. the implementing agency] which immediately carried out a perimeter survey and soil investigation... because the site was state land, it always available at any time to do survey works or to begin construction...” [Baker]

A few respondents have pointed out that as a result of ‘vague guidelines’ and ‘rushing to meet the datelines’, some of these projects were not carefully prepared. They were prepared by junior staff and sometimes were not checked by senior officers.

Projects were submitted in the belief that errors could be rectified later. One of the programme administrators at the state level who was involved in six projects during 3MP to 6MP explained the following:-⁽⁴⁾

Since the Ministry was operating under a tight schedule in preparing the low cost housing proposal for a further submission, it had requested the state to put forward its proposal as early as possible. To prepare the list, the SHD had to depend on proposals forwarded by the district offices. This process took a long time. In order to meet the dateline, the SHD had to submit proposals hurriedly. For example, without verifying project detailed descriptions whether the lands were suitable or otherwise for the projects. When projects have to be implemented the proposed sites might be full of squatters, or might have no access to utilities or might even have been allocated for other purposes.” [Kas]

SITE SELECTION

The next process following site identification is site selection. Site selection is the decision which confirms the identified site for the proposed project. The difference between this site selection and the previous site identification is where site selection involves a commitment to acquiring land, carrying out surveys and drawing lay-out plans for approval. Whereas site identification is a tentative decision or ‘ear marking’ of the location of the project by marking it in the land office’s map. Site identification also includes preparation of a land report for the state government. The discussion on site selection focused on the question of how decisions were made about locating projects. Counting the projects, only a small number had made site selection before the beginning of five year plans, while the great majority made decisions after the projects had been approved for the five year plan. Site selection was focused heavily on ‘state land’ while acquiring ‘private land’ was considered as the last alternative when ‘state land’ was not more available. Various patterns of site selection were observed for all categories of projects.

Uncompleted Projects

Six uncompleted projects (Muddy Canal, Lancott 2, Black River 3, Broken Mound, Three Mile Thorns, and Bamboo Splinters Settlement) were compared to find out if any relationship existed between the issue of site selection and the fate of these

projects. Three projects (Muddy Canal, Black River 3 and Bamboo Splinters Settlement) show indecisiveness, delays in making decisions and often a change of mind about their sites. One project (Lancott 2) had chosen an inappropriate site due to a lack of state land, while another project (Three Mile Thorns) was cancelled to give way for a medium cost and high density project. One project's incompleteness (Broken Mound) was not related to site selection but to the building contractor's problem.

Muddy Canal Project was formulated in 1981 (4MP) and until 1994⁵, had not reached the construction stage. Originally before the project formulation, the site for this project was identified as on private land. When the project was approved for the 4MP, evaluation of the suitability of the site was made with the assistance of technical services from the Ministry of Housing and Local Government. The proposed site was found suitable and the state proceeded with actions to compulsorily acquire the land under the Compulsory Land Acquisition Act, 1960. However a decision was later made to look for another location. This occurred because the land owners had made a protest to their state legislative councillor about the compulsory land taking. The SHD then looked for an alternative site. Another site on private land was proposed by the district office and later agreed by the SHD. The land was then acquired by the state government by enforcing the power provided under section 3 of the Compulsory Land Acquisition Act, 1960. There were a number of houses on the land occupied by nine families.

The Deputy Minister of Housing and Local Government, who was also the parliamentary councillor for that area, directed the SHD to execute the project as soon as possible. SHD took the necessary action and promised to start construction of the project within six months of that directive. However the project did not progress very far, as local politicians interfered and requesting the project to be located another site. Delays to this project continued because of the searching for another site. In a dilemma and unable to solve the issue of site selection, the state finally left the decision of whether to proceed with this project entirely to the state legislative councillor for that constituency. After the 1990's election a new state legislative councillor was elected. Finally he made a decision about the site for this project in early 1993. The programme administrator, who is in charge of this project mentioned that the project is still facing problems because a more difficult site was finally selected and the lowest bid offered for the construction was far beyond the limit of maximum loan of M\$25,000 per house allowed by the central agencies. If the state had to proceed then additional costs for this project must be come from state funds. This Muddy Canal project demonstrated how indecisiveness and delays in making decisions about the project site caused delays.

Black River 3 Project was formulated in the 4MP and planned as an extension to two previous low cost housing projects. A piece of private land adjacent to the previous phases had been selected. To avoid longer time and incurred cost when acquiring private land, the district office had proposed to the SHD another site which was on a piece of state land. The new site was also closer to the town centre. In addition, the intended aim was also to evict illegal squatters on the land. Therefore the land office had a strong reason to serve notices to the squatters. However, the squatters put up strong resistance to this scheme. Unable to solve this problem, which had delayed the project to the end of five year plan, the state finally decided to cancel it.

The site for ***Bamboo Splinters Project*** had been proposed by the district office adjacent to the previous two phases of a low cost housing project. The site was agreed by the state government and the lay-out plan was approved by the Department of Town and Country Planning. In early 1979, the state councillor for the area requested the state government to re-consider and look for an alternative site because the squatters refused to move from the land. The District Office and SHD had to search for another suitable site nearby. The process took a long time because of the need to obtain agreement between several agencies; the District and Land Officer, the SHD, the Department of Town and Country Planning and the state councillor for the area. Finally a site was selected and agreed by various parties. It was adjacent to the site of a public corporation's housing project. Confirmation about this alternative site was received by the implementing agency in September, 1982. This site was also occupied by squatters but fewer in number than the first site. The Land Office took a long time to solve the squatter problem on the land. Finally, the earthwork for this project began only in early 1985. Then in June, 1986 the implementing agency directed the contractor to stop the work although it had progressed about 35%, due to problems concerning confirmation of the amount of land required and certification of boundaries for this project with the neighbouring housing project. Burdened with these problems the state lost time and was unable to solve them until 1994. Finally the state decided to cancel this project in 1994. The site of this project was transferred to the privatisation programme.

Lancott 2, another incomplete project, was cancelled because of inappropriate site selection. Due to the limited availability of suitable state land in the area, a football field was selected for the low cost housing project. At first the state was determined to proceed with the project and all necessary preparation was made so as to obtain

approval for the lay out plan from the Department of Town and Country Planning, secure financing from the Treasury and finally call tenders for construction. Before making an award to a successful contractor, the state re-considered its decision to proceed with the project. The state concluded that the site was inappropriate and instructed SHD to find an alternative site. Unable to find an alternative site, a 'powerful figure in the state' finally decided to cancel the project and requested funding for the project to be channelled into other more important projects.

Three Mile Thorns Project was proposed on valuable state land which was surrounded by housing and industrial development. The state decided that this piece of land would be appropriate for a higher density medium priced housing development. Furthermore, the state was of the opinion that its SEDC's low cost housing projects would cater for the demands of the low income people in the area. After the project was cancelled, this proposed site was handed over to the state's own housing development company to proceed with higher density and medium price housing.

One of the uncompleted projects (*Broken Mound*) had no association with the problem of site selection. The project was not completed because the building contractor appointed failed to construct the project due to its internal problems. The state was reluctant to revive this project by re-appointing another contractor, as is the usual practice, because the state was unable to cope with the increased cost and also there would be a lack of demand for low cost houses in the area if the project was completed.

Slow Projects

Five projects (Risefield, Trunkville, Gingling, Swampy Village and Blind Pheasant Scheme) are categorised as slow projects because they were completed within two or more of the five-year plans period. Amongst the five projects only Risefield projects was subjected to several changes to the selected site, while four other projects were delayed as a result of indecision about when to start because the states were giving priority to other important projects. Thus, delays in making decisions about the selection of site had occurred.

Trunkville Project underwent three five year plans. It was initiated in the 3MP and completed towards the end of 5MP. The time taken from project formulation to completion was 13 years (160 months). Delays occurred because of indecisiveness in making decisions about where to locate the project. Several changes of decisions on

the issue of the site occurred. A site for this project had been identified by the District Office before the project was formulated. The site was not agreed by the SHD because there were many squatters on the proposed site. Then another alternative site was proposed by the Land Office similarly with squatters, although with a lesser number. The Land Office justified that *"...only a portion of the land was occupied by squatters [and] a better site was not available because there was a lack of suitable state land in the area."* To overcome the squatter problems, the state agreed, on the advice of the SHD and its implementing agency to construct only 100 houses on the portion which was not occupied by squatters. Meanwhile there was a plan to relocate these squatters to another site. When the squatters could be resettled, the construction of the remainder 200 houses would proceed.

The responsibility to relocate these squatters to another area was given to the Land Office. But, no progress was made to overcome the squatter problem. It was reluctant to implement the decision because the office was constrained by lack of resources, lack of a concrete resettlement plan and inadequate backing by the state government. Instead the Land Office requested SHD to search for another site. The searching and obtaining agreements from various parties wasted additional time. Later, they agreed to locate the project on private land. Therefore, a new project lay-out plan was submitted to the Town and Country Planning Department for consent. The Land Office also prepared actions for compulsory purchase of land under the related law.

Concerned with the amount of compensation involved in acquiring the land and the increased cost of the project, again SHD directed the Land Office to attempt to find another alternative site. Several sites were proposed, but still a firm decision was not achieved. For example in the middle of 1982 a decision was made by the District Officer and the programme administrator to carry out the construction of 200 houses in two locations: one consisting of 100 houses adjacent to phase one, and the other 100 houses at another location nearby. This issue of the project's site was discussed in the meeting of the State Action Committee for Public Low Cost Housing on 20.7.84⁶. Unable to find an alternative site, the representative from the District Office suggested SHD cancel this project and its allocation of funds be transferred to other projects. The suggestion was rejected by the committee and the decision was taken to proceed this project. Until 1984 no firm decision was made about the site for this project.

Finally after an exhaustive searching for alternative sites a final decision was made to carry out this project on the same land where they had built the first 100 houses. Instead of the 200 houses originally intended, the project settled for only 178

houses. This was partly because the land still was occupied by squatters. Then the earthwork for this project's second phase began in late 1984, after being planned for 10 years.

Gingling Project was not included among the list of priority projects at the beginning of 3MP. The state was undecided when to start implementing this project because the approach adopted at that time was to concentrate on a few priority projects. When these projects were completed only then would the state arrange another priority projects list. The selection of the site was made during the second year of the 3MP. The compulsory land acquisition process for this project was completed in the fourth year of 3MP which was followed by a request to prepare the project's lay out plan. In contrast the *Swampy Village Project* (another project in the same state and the same 3MP), site was decided and included among priority projects, but was programmed to begin construction in the fourth year of 3MP.

Uncertainty of whether to proceed with the project or not had caused delays to two other slow projects and *Blind Pheasant Scheme*. These projects did not face problems of change of site and squatters. There was no resistance or appeal made by the land owners although private lands were selected. This was because no existing residential house were involved on the proposed sites.

Two of the five slow projects (Risefield and Swampy Village Project) were not related to site selection. Readily available state land was selected. Delays to these projects occurred as they began only in the fourth year of 3MP, because the state concentrated on more important projects. Delays also occurred at the end of the completion stage, because the project (Swampy Village) faced on difficulty of getting electricity supply. For project Bamboo Splinters Settlement additional time was required to comply with the compulsory land acquisition process and delays occurred during the construction stage.

Average Projects

There are nine low-cost housing schemes categorised as average projects. They are as follows:-

- (1.) Pumpkinville,
- (2.) Hotville,
- (3.) Lakesland Village,
- (4.) Whiteville,
- (5.) Barkings,

- (6.) Coral Cape Housing,
- (7.) Stony River Housing,
- (8.) Golden Hope Scheme, and
- (9.) Ficuswood Resettlement.

One of the peculiar characteristics of these average projects is that for nearly all of them (except one), state land had been selected as the site for the projects. In addition firm decisions were made with no change to the sites selected despite some of the sites (no.3, 6, 8 and 9) being affected by squatter problems.

How was proper site selection made for these average projects? An analysis of when the decisions were made about the site of the projects reveals that they were made during the first year of the five year plan. In addition the SHD and the District Office did not face any difficulty in obtaining land because land was abundant.

Two projects (Lakesland Village and Ficuswood Resettlement) were involved with squatter problems which were solved by taking them on as occupants for the project. Therefore, as explained by the programme administrator, "*...the squatters did not pose any threat or protest when the sites selected.*" In contrast to one of uncompleted projects (Bamboo Splinters Settlement) and two other projects (Trunkville and Black River 3) the squatters refused to move and protested their eviction to state councillors. For the Lakesland Village project, the housing construction was implemented through several phases which started first on the empty land. After the squatters had moved to the completed houses then the next phases of development took place. A land problem for Stony River project was solved by payment of compensation to occupiers; this enabled the site to be cleared of any occupiers who might cause constraints on the project construction.

Sometimes project location was determined by the chief minister of the state as demonstrated by projects Pumpkinville and Lakesland Village. The chief minister become an advocate for the projects and created an environment of more co-operative inter-agency relationships. As one respondent at the implementing agency level for project Lakesland Village pointed out:-

“...the top figure in the state himself made the decision on the site of project where everyone involved had to go ahead with the project without ever thinking of shifting to another site. One of the reasons was probably because whoever was involved in advising about the site had made a proper study and careful selection. We also had very good co-operation with various agencies especially the technical departments. These departments gave priority to this project, because they knew the ‘Menteri Besar’ (chief minister) was very concerned about the project. We made them answerable directly to the ‘Menteri Besar’ if any problem arose and couldn’t be resolved. [Rosly, 8.11.1994]

The fast projects

Four projects were considered fast projects because they were completed within less than 60 months; a time frame which was equivalent to the actual time frame of the five year plan. Three of these projects (Lumber Junction, Manor and Long Sand) were the 4MP’s project and one project (Knee Lie) was 3MP’s project. Fast projects all shared a common characteristic in which site selection was made early during the beginning of the five year plan and firm decisions were made without any change to other locations. In fact, for Lumber Junction project, the site selection and land had been acquired even before the resourcing stage. Thus, it showed the commitment of the state to implement this project. Financing for the purchase of land utilised the revolving fund; a fund created to assist the state government to make necessary advance payments for the public low cost housing projects.

For Manor project, after it was approved for the five year plan, a visit to the site was made by representatives of the SHD and other technical agencies. The purpose was to make an assessment and to verify the suitability of the site proposed. Through this approach utility agencies (electricity and water supply) were informed about the project. Then, these agencies responded to the SHD and confirmed if utilities could be supplied to the intended project.

Site Selection: Overview

Site selection is important criterion related to project performance. Average and fast projects have demonstrated that sites were selected early as well as the state making a firm stance on decisions. In contrast, uncompleted and slow projects revealed changes of sites and delays in making decisions about the site. A number of

respondents at the implementing agencies questioned why they came into picture only after sites had been selected? They argued that better sites would have been selected if their advice had been sought. One of the respondents emphasised that *“... housing development needs professional undertakings starting from its initial planning stage to the completion stage. The practice of leaving site identification to junior staff at the Land Office, then making decisions on site selection without further checks by senior officers would jeopardise the fate of project's achievement.”* Few respondents expressed they knew that there were some sites not properly identified and selected during the early stage of programme preparation but just to accommodate the list of projects to be submitted to the central agencies. Site selection was done without proper feasibility studies. Respondents from the central agencies also stated that sometimes the state identified the wrong site. Someone even put a very blunt statement *“... the state was not careful in making site selection for the project.”*

Land matters

The selection of sites for projects basically involved two types of land; ‘state land’ and ‘alienated land’. ⁽⁷⁾ State land is the land that belongs to state governments, whereas alienated land is private land. In general, as stated earlier, state land has become the main focus of this programme when proposing sites; it is an effort to control project costs and to save time. The state has the power to acquire alienated land by force through the provision of the Land Acquisition Act, 1960, but the process is lengthy and implies additional costs to the project, because of legal procedures and payment of compensation to land owners. The main reason for focusing on ‘state land’ was because it was basically available at any time. This was explained by a respondent involved in Risefield and Pumpkinville projects :-

“...By right, state land virtually is available at any time. The implementing agency may enter the land as and when they wish without any restrictions. But if the project would have to acquire alienated land, the process would have been longer.”

Another respondent for Coral Cape project also expressed that:-

“...certain procedures must be followed to secure the state land. But I perceived this was not a major constraint because this project was one of the government projects. The traditions have been set by the administration to give priority to government projects. The implementing agency may enter the land first, approval to procedures can always be obtained later.”

In addition also for Hotville, Knee Lie, Long Sand and Swampy Village projects, it was pointed out that;

“...The land was not a critical issue because state land was plenty in those days. The role to provide appropriate land for projects was carried out by the Land Office. We just accepted whatever proposed by the said Land Office because we believed that they knew better what and where the land was. The co-operation of the Land Office was good.”

Alienated land (private land) only became an alternative when state land was not available. Three reasons were voiced why there was reluctance to choose alienated land: additional time, the question of priority and increased cost. Fulfilling legal procedures of acquiring alienated land under the provision of Compulsory Land Acquisition Act, 1960 requires at least six months. For the slow project of Risefield, one respondent explained that, *“.. the site involved was private land where the land acquisition with its long complicated procedures had to be carried out; this was partly the reason for the delay in the completion of projects.”* Another respondent also stated the same *“... the practice is more common in the land administration where a process to acquire land for development proposals can involve lengthy administrative steps and legal requirements. It has been blamed and used as an excuse for non-implementation of many government's projects.”* In explaining the effect of this land acquisition on the project's cost and priority he also added:-

“We also have to depend on the land office, of which this office's priority is far beyond our control. The Land Office has its own priority. Although we can shorten the time span for the land acquisition by issuing the certificate of urgency, it would cost additional money.”

Several programme administrators (Baker, Chali, Halo, Haze, Kas, Raft and Ras) were in agreement that site selection became more difficult because the state land has become scarce and private land more expensive; in contrast in the past state land

was abundant so projects could be easily sited on them. easier land. Chali mentioned that:-

“To obtain a suitable site which is close to the main road and other facilities has become more difficult if we have to depend on the state land. To obtain land by compulsory acquisition then we have to spend on extra time to the whole project’s implementation process. Although we can overcome the shortage of state land through compulsory acquisition, we must face the question of additional costs incurred to our projects.”

Has state land really become scarce and difficult to obtain? One respondent raised his doubt in the following way:-

“The Land Office always reported land was not available to cater for government projects. Although we were in doubt and questioning the truth, we took the stance that we should not cross their jurisdiction. We assume that they know their districts better. But, why the land suddenly available for other projects? Especially if there were certain important figures pushing behind the project?” [Hairy]

Five projects (Coral Capes, Trunkville, Lakesland, Bamboo Splinters and Ficuswood) were involved with squatters’ problems. Short-sightedness about squatter problems caused several projects to experience delays and also cancellation. Actors involved in programme implementation were misled when they assumed that squatter problems were easy to solve. Black River 3 project was finally cancelled when the Land Office was unable to evict squatters on the proposed site. One of the slow projects (Trunkville) was originally proposed on a piece of land occupied by squatters.

One of the respondents at the implementing agency involved with four of these projects commented *“...The state [government] seemed not to be serious and not committed to implementing the programme. When they proposed low cost housing projects, there were squatters occupying the land. By right the state should have solved this problem first before they handed over projects to us.”* However, there were cases (Lakesland and Ficuswood) where squatters’ problems were solved effectively and at the right time by the joint effort of the state, implementing agency and land office.

Comparison between Projects

A comparison between the uncompleted projects and other projects showed that uncompleted projects (except Broken Mount) were faced with land problems which caused project delays and lead to their cancellation. On Upper Canal project the respondent informed that:-

“The necessary action to process compulsory land acquisition was made...but changes of site caused a wasting of time and another delays... When the loan application received by the Ministry, we were ensured that the proper procedure to acquire the private land would be carried out. Later, the state informed [us] about shifting to another site and the Land Office was taking actions to cancel the [previous] gazette notification of acquisition. Finally, another piece of land was compulsorily acquired in mid-1992” [Chali]

Lancott project was cancelled because it was proposed on a football field due to a lack of state land in the area and the SHD was reluctant to acquire private land in order to cut down project costs. Black River project was proposed on state land but occupied by squatters. The Land Office was unable to enforce squatters eviction and this finally led to project being cancelled. As for the Bamboo Splinter project, one of the reasons for cancelling it was because the site's boundaries were not properly identified. Three Miles Thorn was proposed on high value land which was considered more appropriate for higher value housing. Only one uncompleted project, the Broken Mount, did not faced any land matter problems.

In general, the majority of slow and average projects were not faced with land problems slowing their progress, with the exception of three projects (Trunkville, Ficuswood and Golden Hope). Trunkville had difficulties in finding a suitable site. Both Lakesland and Ficuswood projects were for squatters resettlement programmes but Lakesland project had the advantage of ample space to start without displacing the existed squatters' houses. Whereas at Ficuswood, it was impossible to relocate squatters temporarily somewhere else. Fast projects (except Long Sand), had the advantage of already having available land planned for low-cost housing.

Guidelines

The call circulars issued by the EPU provided guidelines for project submission in which the main criteria were related to the approach adopted for each of the five year plans. For example, during the 5MP, the approach adopted was to generate

economic growth and to create employment opportunities as measures to overcome initial signs of economic recession in the country. Since the guidelines issued prior to the beginning of the five year plan were for all projects in general, comparisons between categories of projects were not made. The analysis provided here only reflects all categories of projects in general.

The majority of respondents mentioned 'the usual guidelines', 'the general guidelines' or 'the standard guidelines' when they were asked the question, "...were there any guidelines provided when formulating projects for the five year plan?" These guidelines were the call circulars issued by the EPU prior to the beginning of any five year plan.

Many respondents viewed the circulars as being too general. These circulars were intended for all types of project submissions and were not just for the housing programme. One respondent pointed out that, "*We received the guidelines, but I think the guidelines were not clear enough to those who were involved in this initial housing implementation process.*" The programme administrator at the Ministry level also confirmed, "*The five year plan circulars and guidelines were too general, not detailed and not very clear specifically regarding the public housing programme submission. The criteria used stated that the project must be viable and land must be identified.*" He also added that, "*The criteria used by the Ministry was that the project must not exceed the cost limit of M\$25,000; the site must be available and close to infrastructure facilities; and, there must be a demand for such houses. If the project costs more than M\$25,000 then the state has to top up the difference. In short the main responsibility to propose an appropriate project rested with the state.*"

The interview responses on several projects imply that five criteria were used as the guidelines for project proposal which consisted of the following:-

- (1) the project must not exceed the cost limit allowed by the central agencies, otherwise the state must make up the difference
- (2) the project must be viable
- (3) the land for the project must have been identified
- (4) the proposed site must be close to infrastructure facilities
- (5) there must be a demand for such houses

In general these criteria should have been used by the District Offices and the SHDs when they propose and justified for a list of projects. However, as described earlier,

site identification, site selection and land matters indicated that not all projects conformed to these criteria.

Almost all projects when proposed were put near to the pre-determined cost limit in order to gain approval from the central agencies. According to one of the respondents, when the list of projects was submitted to the Ministry, the tactic employed by the states was to produce more projects than they intended to carry out. When the central agencies scrutinised the list and cut a number of the projects, the states secured a number of projects close to what they had originally desired.

“The project must be viable” was one of the criteria imposed by the guidelines and by the central agencies when they were assessing the projects. However, the meaning of ‘viable project’ remained vague, many respondents using it interchangeably with ‘implementable project’. One respondent stated that, “...*the project would be considered viable if the site had been identified and proposed in a suitable location.*” He further explained that “...*a suitable location was one close to infrastructure facilities and where there were demands for such a project.*”

“Demand for low cost houses” was also a criterion imposed by the guidelines. Demand for houses in proposed projects was based on information provided by the District Office. This occurred because: the state was lacking a housing master plan; the state assumed that the District Officers knew their districts better than the state on matters relating to housing demand and availability of land; and to encourage ‘participation from district level from the initial planning stage’. Almost all projects proposed were reported as being in demand. However, during the later stage, delays and changes made to the projects affect the issue of demand. This implies that when the projects were proposed, whoever was involved conformed to the guidelines.

When six uncompleted projects were analysed, it was found that three projects had some degree of relationship with the issue of demand. Lancott 2 project was cancelled because the state believed that the low rise flats proposed in the rural area were unsuitable and they would be unable to obtain buyers. Broken Mound project was also cancelled; there were demands when the project was proposed but delays had caused its target group to opt for other housing projects. In spite of the demand for Three Mile Thorns, it was cancelled because the state believed it could be catered for by its SEDC’s low cost housing projects in the area. In contrast amongst slow projects: only Risefield project demonstrated that it had very little demand. This project was proposed as a measure to implement a fair distribution of projects in the

district. Lack of demand from buyers was one of the reasons why the decision was made to slow down the project. Finally, for average and fast projects there was evidence of demand for such low cost houses.

What was the effect of having general and unclear guidelines on the programme? A programme administrator at the state level explained “...*the site selection [for the project] by some people was not cautious due to lack of clear guidelines. They sometimes made selection just by looking at the plan available at the land office [without really checking it on the ground] or sometimes did not understand what type of land was suitable for the housing development.*” And in addition to this “...*the assessment on the site proposed for the housing development was not the main consideration; they just named the area, and from this they hoped to find a suitable site later.*”

Should the central agency have provided better guidelines? Although many respondents agreed that better guidelines would help to improve project proposals, one respondent stated that:-

“They [the states] should know the guidelines set by us considering that it has been going on since the Second and Third Malaysia Plan. Although the guidelines were very general because similar call circulars were used by the Economic Planning Unit as by other public agencies, these were the same guidelines which were issued in the last 10 to 15 years and we managed to obtain the list of projects proposed from the states ”[Zaky]

Inter-agency relationship

Many respondents highlighted the fact that during the 3MP inter-agency relationships were good. The stance adopted by many government agencies was to give full co-operation and top priority to government projects, especially the PLCHP aimed at housing low income people. As one of the respondents emphasised “...*there is a tradition of giving priority to government projects. We could carry out projects first, and rectify certain procedures later.*” Setting the standards for low cost houses was entirely at the discretion of implementing agencies. Most of the implementing agencies were using the Public Work Department’s standards for government projects. Projects were also not referred to the local authorities for planning approval. However, since the beginning of the 4MP gradual changes have been taking place in inter-departmental relationships, including the imposition of standards and planning

approvals. Towards the end of 5MP government projects were given similar treatment to that given to private sector projects, and most projects were also subjected to local authorities' approval. All these added to the time span to complete the project. Many respondents explained that the shift of stance was due to the higher priority given to privatised and private sector projects.

Variations between plans

There were some variations in the five year plans from state to state. Negeri Sembilan made better programme preparation for the 3MP and 4MP, but submitted only a few projects for the 5MP because several of its projects from the past plans were still in the process of implementation and needed to be carried forward to the 5MP. During the 3MP Negeri Sembilan had prepared lists of projects and estimate of costs. This was made possible by a study carried out for the state by a consulting firm. Selangor made better preparation in the 3MP and 4MP but did not submit any new project for the 5MP. The state decided to implement low cost housing through joint venture projects with the private sector under a programme known as 'the special low cost housing programme.' Only during the 5MP Review did the state accept the PLCHP but with modifications into a 'site and services' approach. As informed by a programme administrator, it was not clear to him why Selangor accepted this programme which was proposed by the Ministry. During 3MP, Perak came up with a list of projects, but many of the sites were not identified and so many of its projects existed on the list only.

Summary of programme formulation

This section highlighted initial project planning, covering project formulation, site identification, site selection, land matters, guidelines and inter-agency relationships. The programme preparation was a lengthy process which involved actors from district level to the federal level. The project formulation process was similar for each project. The initial programme implementation process for this programme (which included site identification and site selection) involving various parties, mainly at the district and the state level. Their actions and decisions affected the programme performance at a later stage. Indecisiveness and delays at this stage caused some projects to be cancelled or slowed down. The problems faced at the initial project planning stage described in this chapter further explain the finding of the previous chapter that the average length of time taken from project formulation to completion was about seven years.

Evidence obtained from interview responses of comparison between projects indicate that some degree of preparation was made for the public low cost housing programme during each five-year plan. Before the launching of any five year plan, the states were requested to submit project proposals to the central agencies. The states then in turn directed the District Offices to prepare a list of projects. The list of projects was prepared on the basis of guidelines in the call circulars. The project list was scrutinised and went through several stages, at both state and federal level, until the list was approved for the five year plan.

Evidence about site identification show that sites were identified for all uncompleted projects and the majority of other projects after they had been approved for the five-year plan. Similarly, sites were identified for some of the completed projects, before the project had been approved for the relevant five year plan. Identified sites indicate that adequate preparation was made for the plan (although they could be changed at later stages).

Only a small number of projects had made the selection of their site prior to the five year plan. Several projects completed in an average or short period of time made the decision early in the five year plan, in contrast to the uncompleted projects where they were indecisive about site selection. State land had become the main focus of this programme because it was available with fewer restrictions (if not occupied by squatters) and was cheaper than alienated land. There would be benefits if the site had been identified early, before the project had been formulated and a decision on site selection made at an early stage of the five year plan. In this way, the state could make fast decisions, arrange the priority of their projects and move to the next stage of implementation. Projects with a strong commitment from the state proceeded with fewer problems during the initial planning stage.

The call circulars were concerned mainly with general criteria and deadlines for submissions. The time given to prepare the list of projects was inadequate for anyone concerned with meeting deadlines. During the 4MP the SHD was given only one month to resubmit proposals to the Ministry; as a result, the SHD instructed district offices to produce a list of projects within only two weeks. Many respondents commented on this issue, which was *“made in a hurry with a sacrifice of quality,”* and believed that it somehow caused some of the later problems.

One programme administrator at MHLG who was involved with the preparation of two of the five year plans pointed out that preparation of the projects had been done in a hurry and adequate time had not been given.⁸ That was why, when the Ministry questioned the priority of the projects and asked for detailed information about sites, the states were always unable to furnish adequate information. This respondent suggested that the central agencies must inform state governments early and they should be given ample time to prepare their project proposal. For example, instead of three months, the central agencies should give one year. He explained further, that to overcome problems and to improve project implementation, during the 6MP the central agencies had visited some of the proposed sites which were near urban areas. However, since the central agencies had limited time, visits to all sites were not made.

During project submissions, the state governments were given merely one month to come up with proposals to the Ministry. This length of time was not adequate, because the states had to depend on district and land offices. These offices were given two weeks to make project proposals to the state governments. It is not difficult to imagine what type of proposal could be expected from the two week time period. As a result, projects were not adequately prepared.

Several issues during the planning stage have been highlighted in this section, including those of site identification, site selection, land matters and guidelines. These issues seem to be inter-related which imposed constraints on the programme implementation and cause delays of project implementation at this formulation and planning stage. These factors all contributed to poor preparation for the list of projects proposed for each five year plan.

PROJECT RESOURCING

INTRODUCTION

Funding for this programme is in the form of loan from the federal to the state governments. An interest of 4% per annum is charged to the states and repayable to the federal government within 30 years. The payment of the loan is made in the form of an 'annuity' to the federal government. The states in turn then sell the houses to buyers

and charge 5.5% interest and collect monthly payments. Before the money can be provided to the state government, fund allocation must be made, loans must be approved, agreements must be signed and finally the amounts of loan withdrawn is based on the rate of project progress.

The issues covered in this section on project resourcing include the allocation of funds, project costs, loan approvals and loan withdrawals. Questions posed cover as, 'How was the process on the allocation of funds made for the programme?', 'What were the procedures involved for financing the programme?', 'How far were the loan approval and loan withdrawal associated with the project implementation process?' and "What was the project cost against the loan approved."

Project resourcing is the second stage in implementation. Project resourcing is concerned with obtaining financing for the projects: it begins with the application for the allocation of funds under the five year plan and the allocation of the annual budget. Then, project costing is prepared and a loan approval is applied for from the central agencies. This involves two steps: the loan assessment by the Technical Committee for Housing Loans (TCOHL), and the 'final say' by the Treasury after the recommendation of TCOHL. State governments consider this step critical, "*...because a project is not considered secured unless the loan has been approved by the federal government*"⁽⁹⁾ and also because of "*...the limitation that loan applications have to be submitted on time, because the committee at the Treasury meets only twice annually.*"⁽¹⁰⁾ After the loan has been approved, the next step is to proceed with the signing of an agreement between the state and the federal government. Once the agreement is formalised, the state may apply for a loan withdrawal. The number of withdrawals and the amount for each instalment to be made are dependent on the financial projection and prediction of construction progress which are detailed in the agreement. Certain procedures are involved in the loan withdrawals; the state has to make applications for the payment which is usually based on the financial requirements and construction progress of the project. The summary of funding, estimate and project costing for these projects can be seen as in Table 9.2.

Project Allocation

Project allocation involves two activities: the process for the allocation of funds under the five year plan; and the process for obtaining the annual budget. The allocation of funds under the five year plans consists of estimates for each project,

whereas the annual budget is to make funds available when loan withdrawals are made to finance the project.⁽¹¹⁾ The annual allocation is roughly about one fifth of the total allocation for the five year plan projects.

Table 9.2: SUMMARY OF PROJECTS FUNDING AND RESOURCING FOR A DETAILED STUDY UNDER THE QUALITATIVE DATA COLLECTION

Project's Name	Allocation of Funds Per Unit	Estimate Per Unit	Loan Approved Per Unit	Constructi on Tender Per Unit	Total Cost Per Unit	Adjusted Total Cost to 1991's Price Per Unit
1. Muddy Canal	\$21,960	\$22,500	\$21,960	\$33,000	-	-
2. Lancott 2	\$11,000	\$12,500	\$12,500	-	-	-
3. Black River	\$11,000	-	-	-	-	-
4. Broken Mound	\$11,000	\$17,502	\$4,767	\$17,139		
5. Three Mile Thorns	\$11,000	-	-	-	-	-
6. Bamboo Splinters	\$6,248	\$14,897	\$9,687	\$23,897	-	-
7. Risefield	\$17,200	\$19,419	\$23,101	\$21,533	\$23,150	\$20,078
8. Trunkville	\$5,333	\$14,568	\$14,004	\$9,554	\$11,554	\$12,649
9. Gingling	\$4,835	\$10,000	\$8,146	\$11,420	\$11,483	\$13,144
10. Swampy Village	\$11,000	\$16,100	\$15,654	\$14,200	\$15,654	\$17,297
11. Blind Pheasant	\$9,866	\$14,069	\$20,702	\$10,309	\$20,702	\$19,830
12. Pumpkinville	\$15,770	\$20,110	\$15,770	\$20,885	\$25,000	\$23,850
13. Hotville	\$8,000	\$8,000	\$7,500	\$8,000	\$9,000	\$11,465
14. Lakesland Village	\$7,223	\$7,624	\$4,625	\$5,095	\$11,609	\$12,828
15. Whiteville	\$12,500	\$12,658	\$12,658	\$13,515	\$15,827	\$14,322
16. Barkings	\$13,462	\$14,327	\$13,676	\$12,932	\$13,676	\$15,792
17. Coralville	\$11,000	\$13,500	\$14,558	\$14,128	\$14,558	\$15,980
18. Stony River	\$8,000	\$17,500	\$15,985	\$18,145	\$18,485	\$20,144
19. Golden Hope	\$16,706	\$19,454	\$14,126	\$18,281	\$19,727	\$21,466
20. Ficuswoods t	\$11,000	\$40,859	\$28,333	\$30,781	\$40,029	\$42,488
21. Lumber Junction	\$11,000	\$12,636	\$14,340	\$13,500	\$14,340	\$15,845
22. Knee Lie	\$10,633	\$7,729	\$11,909	\$11,675	\$13,009	\$15,022
23. Manor	\$11,000	\$17,462	\$14,473	\$13,162	\$14,473	\$15,922
24. Long Sand	\$10,000	\$15,249	\$14,873	\$10,216	\$14,339	\$16,588

Source: Researcher's Qualitative Data Collection 1994

In general, the process of project allocation for the five year plan was almost similar for all projects: the state submitted the list of projects to the central agencies for further consideration, then allocation of funds for each projects are approved and

provided. At this stage the state is informed of the list of projects approved and the amount of funding available for each project. However, an irregularity occurred in the case of the 3MP project allocation which was approved directly by the Ministry and only the loan application was approved by the Treasury. But, at the beginning of 1977, the Technical Committee on Housing Loans (TCOHL) was formed by the central agencies. The function of this committee has been to evaluate and make recommendations for all loan applications to the Treasury. During the early 3MP, the project resourcing process was shorter. After that, with modifications of the resourcing procedures, the process has become longer.

During the revision of the five year plans, additional allocations of funds for all the states increased as a result of a number of projects that were added to the list of approved projects for the plan (refer to the discussion in Chapter 5). In certain instances, new projects were also proposed by the state in addition to the approved list of projects. To accommodate this requirement, some other unimportant projects were dropped from the list.

The Ministry recommends that projects for each state are based on the state's past performance, its capability to implement projects for the plan and the readiness to implement the projects. Then the Ministry recommends the list to the EPU. How the Ministry assesses the list of projects proposed by the states can be described as follows:-

"..the criteria were costing and the readiness to implement the project. The decision about the location and priority of the project were decided by the state. They know their priority better than us. The main concern of the Ministry is that proposed projects would be able to be completed within the plan period. They must tell us whether the land is ready or not and whether the costing is not more than \$25000"⁽¹²⁾

The allocation of funds for this programme is also determined by the EPU in relation to other programmes and is distributed among the states. Guided by the ceiling determined by the EPU, the Ministry work out the amount to be allocated for each state. The Ministry assesses the proposal by, *"scaling down the allocation requested by the states according to the capability of the states based on past trends, and the Ministry is also guided by the housing needs studies carried out in each of the plans."*

The Treasury, together with the central agencies, form a committee to approve the annual budget. The state or programme administrators at the SHD are not consulted in the process of annual budget preparation because administrators at the Ministry level had obtained adequate information which was supplied during project formulation and in addition information provided through the quarterly progress report. One of the programme administrators at the Ministry who is involved in two of the five-year plans explained the annual budgetary process as follows:-

“The responsibility of the Ministry was to look into the yearly allocation requirement, the number of low cost houses needed every year. Normally the budget requirement was straight forward at that moment, we just estimated the average price for those five years. We knew that the maximum price was \$25,000, even though in one [particular] year the average was \$22,000. If we decided how many units were to be built for the country then we just calculated the total cost. Simple arithmetic. Then we got the budget for the low cost housing for that particular five year period.” [Halo]

Besides the total allocation of funds for the five year plan, the process also involved annual budgetary by: (a) MHLG to enable the funding of project and withdrawal of loans by state governments;⁽¹³⁾ (b) state governments to enable borrowing as required by their financial procedures, to allocate funds under the state’s annual budget and to pass legislation authorising them to borrow money from the federal government to finance the low cost housing projects.

Almost all of the sample projects investigated had been allocated with funds with the exception of the Trunkville and Gingling projects. Restrained by a limited financial allocation to accommodate the Trunkville project, the central agencies had requested the state to cancel its other less important projects. In a meeting with the central agencies to decide this, the programme administrator who represented the state, was unable to confirm which projects were considered to be of less importance. Two months later the state confirmed that three projects were to be dropped from the state’s approved project list and replaced by the Trunkville project. Similarly, although this happened in a different state and in an earlier five year plan, a project from the list of approved projects was postponed in order to accommodate the Gingling project.

According to financial procedures the funding for a project lapses, if its financing is not utilised within the plan period. The funding was withdrawn from the uncompleted Black River 3 project due to a lack of progress when the state failed to evict squatters.

Allocation for the Bamboo Splinters project was made available under the 3MP and was then carried through to the 5MP. The allocation was subject to revisions and was increased in each five year plan.

Slow Projects

An analysis on the issue of allocation of funds for slow projects indicate that these projects did not experience problems in obtaining funding, because all projects were funded by the central agencies. Increases to the amount of funding were requested to the Treasury because of delays to commence the project as well as the effect of inflation.

Risefield project: the central agencies allocated funds for this project when the state confirmed that this project was one of its priority projects for the five year plan. Although, during 1984-85 this project had been rescheduled as a non-priority project by the state, funds were still available for this project.

Trunkville project: Funds were allocated to this project during the 3MP review. Knowing that the project could not be completed within the same plan, only a portion of allocation was made available in 3MP; whereas the balance was made in 4MP. The allocation for Gingling and Swampy Village projects had been approved by the Ministry to the state. This was because, during 3MP period, the Ministry was provided with the power to approve funding for projects. Only at the beginning of 4MP was the power then reverted to the Treasury. The state government had spent M\$1,000,000 in advance on earth works for the Blind Pheasant project even before the loan was approved by the central agency.

Average Projects

All average projects were assigned with an approved budget at the beginning of the five year plan. However, some of the projects required bigger amounts of funding than were allocated. This was the case in Pumpkinville, Hotville, Lakesland, Stony River and Ficuswoods projects. To meet the project funding the states cancelled other projects, added money from their own coffers and utilised the allocation of funds from other programmes.

A lower funding was initially allocated for project Pumpkinville, by the central agencies which forced the state to ask for an additional funding to meet the project cost. The programme administrator explained, *"..the state had to 'drop' a project from the list of approved projects of five year plan, in order to accommodate funding for this project. The state had requested funds of M\$2 million, but the Ministry only recommended M\$1.6 million to the central agencies."* The programme administrator further explained *"...although the central agencies always accommodated additional allocations when requested, this showed that the project lacked accurate costing. The estimates did not consider cost increases during the plan. The cost limit set by the Ministry was not realistic because it was based on the estimate made at the beginning of the five year plan. When construction of projects took place during the middle or towards the end of the plan, the project cost had then increased, therefore, additional allocation of funds had to be requested from the central agencies."*

Hotville Housing project was formulated in 3MP where allocation of funds was approved directly by the Ministry. Its loan application was made directly to the Treasury without going through the TCOHL. This was the practised procedure during the early 3MP. To meet the shortfall of funding for this project, allocation to other programmes were used, from the state's own funding and from the rural development funds.

Lakesland project was one of the important urban squatters resettlement programme in the Klang Valley where the state was fully committed to implement this project. This project was estimated to cost about M\$13,000,000. However, an allocation of funds of M\$9,000,000 was made in 1976 by the federal government, which later in 1979, only approved M\$5,400,000 in the form of a loan to the state. Since the state government was committed to this project, the state was ready to meet the project cost from its own means. Two factors assisted in meeting the financing of this project: 'the most important figure in the state' was pushing this project for political reasons. The state was in a favourable financial situation at that time. A similar situation also occurred in two other projects, the Stony River and Ficuswoods, where the state utilised its own funding to meet the project cost. Compensation of M\$118,202 was made to occupiers on the land for the Stony River Scheme by utilising the state's own funding.¹⁴

Fast Projects

Allocation of funds for four fast projects was made available at the beginning of the five year plan when these projects were approved for the plan. The funds of M\$1,000,000 was approved for the Long Sands project by the MHLG in early 4MP. The basis of calculation was based on the average estimate of \$11,000 per house. Funding for the Knee Lie project was made during the mid-term review of 3MP where M\$1.2 million was allocated. Two other projects, Lumber Junction was provided with M\$1.4 million and Manor with M\$1.64 million. Although these projects were considered fast projects, their total cost were higher than the funds allocated. As a result a higher amount of loan was required for each of these projects.

Conclusion on Allocation of Funds

The process involved in the allocation of funds proved to be lengthy, as described in this chapter. It dealt with applications of funds for the five year plans which underwent several stages, starting from the SHD to the Ministry then through the central agencies such as the EPU and finally being approved by the Treasury. The annual allocation of funds were then made to the Ministry in the form of annual budget to enable the payment of loan to finance the projects. The state governments were also required by their financial procedures to provide these projects with the allocation of funds under the state's annual budget. Moreover, the states also required to pass legislation authorising them to borrow money from the federal government to finance the low cost housing projects.

In general allocation of funds were made available for each of the projects formulated in the five year plans. If new projects were proposed which were not included in the approved list, the state might propose to drop other projects and utilise their allocation of funds for these new ones. The problem with the allocation of funds was that they were sometimes inadequate to meet to total project cost. This occurred because the estimates were made in the beginning of the five year plan without taking into the consideration the cost increase during construction which was taking place several years later and also as the result of delays.

The federal government had also set the project cost limit funded from the loan money to M\$7,500 per house during the 3MP, then to M\$14,000 in the 4MP and increased to M\$25,000 during 5MP. To meet the higher total project cost the states

had to provide additional funding. Although in 1982, the government had approved the maximum selling price for low cost houses at M\$25,000, the fund allocated for the low cost housing project was still at M\$14,000 per house. One of the respondents at the implementing agencies commented, *"...in the situation where basic construction criteria were fulfilled and the project did not face any difficulty then it would possible to build within the cost limit. But several projects were facing problems where this cost limit had constrained the project implementation."*

LOAN APPROVAL

In relation to this, respondents for each projects were asked a series of questions such as:-

- (a) What factors determined when to make loan application for the project to the central agencies?"
- (b) Was the state government informed the basis of the loan approved?
- (c) What were criteria used by the committee to consider loan application?
- (d) Was the loan provided adequate? If the loan was inadequate, how was this problem overcome?
- (e) What were alternatives available to overcome the project's financial inadequacy?

Loan approval is the next step in the project resourcing process. It involves preparing project costing, submission of loan application to the Ministry, evaluation and approval of the loan by the central agencies and finally the completion of loan agreement between the federal and the state governments. The states may then apply for loan withdrawals for the project.

The process of how the Ministry assessed the loan application by is described as follows:-

Hardy, "The state government submits an application in two types of form. One is related to a general socio-economic background information surrounding the location of the proposed project. Another one is related to the project's detailed costing and financial requirements. The state also forwards a site plan and a building plan together with the application. After that, the Ministry seeks "professional" comments from the NHD on the plans and project costing. Then, the Ministry prepares a short loan application paper. This paper is prepared at least one week before the committee meeting.

Next, the loan application is presented to the technical committee [TCOHL] by a programme administrator who is in-charge of the state. Representatives from the state and its implementing agency are also called for the meeting. Their roles are to clarify questions and some other matters ask by the committee members. When the loan is approved, the Ministry informs the states and the Treasury. Then, a loan committee at the Treasury also assess and has a final say on the loan application. Generally the Treasury will approve the loan as has been recommended by the technical committee [TCOHL] because the Treasury's representative is also a member of the technical committee. The Treasury will convey the decision to the state which finally follows by the signing of loan agreement.

The Ministry also checks what projects have yet not submitted to the committee for a particular year. The Ministry will persuade the state to expedite other loan applications and request to submit them on time.”

The above description is the process adopted during 3MP. However other respondents who were working with the Ministry during 4MP, 5MP and 6MP also verified that the above descriptions are generally true of the loan application process in general.

Uncompleted Projects

Three of the five uncompleted projects achieved the loan approval stage before they had been cancelled. While one project, the Three Miles Stone, never achieved at this stage because it was cancelled during the first year of the 4MP.

The funds for Black River project was lapsed when the project did not progress from the initial planning stage by the end of the 4MP. Loan applications for the Muddy Canal, Lancott 2 and Bamboo Splinters projects were approved by the Treasury and formalised with signing of agreements between the federal and state governments. A certain percentage of the loan was paid to the state governments.

The loan application for the Muddy Canal project was submitted to the Ministry in 1983 but on the request of the state it was withheld until the middle of 1985. Delays occurred because the state was unable to make decision on the selection of site. This loan was approved when the five year plan had reached almost its end. One of the respondents involved with the project in the 4MP and 5MP described as follows:-

Halo, “Loan application for this project was made in October 1983. The state applied for M\$911,000 or \$18,220 per unit. This average cost per unit asked was higher than the average loan approved at that time, which was about M\$11,000 to M\$14,000. When the Ministry received the application,

one of the officers in charge of the programme assessed the application. She called the officer in charged at the State Housing Department for further clarification. The officer in-charged informed that "the proper procedures" to acquire the land for project had been carried out. The land had been gazetted under section 8 of the Land Acquisition Act, 1960. The land was estimated to cost a total of M\$250,000 or about M\$50,000 per acre. In addition, the officer also assured that construction works would begin after the loan have been approved by the central agencies.

But later the state requested the Ministry to withhold the loan application for a while. This was because the state wanted to change its decision on the proposed site. The state was looking for another site as the alternative. Once this issue is solved then the state will request the Ministry to proceed with the loan application.

In middle of 1985 the state re-submitted another loan application to the Ministry. The state requested M\$1.2 million for the project. The state had been advised by the implementing agency that the increased amount applied for was because a new site. The project cost was also taking into consideration the rapid development in construction industry at that time. The Technical Committee [TCOHL] then approved a total loan of \$1.1 million for the project or the average cost of about \$22,000 per unit.

Three criteria were considered by the Technical Committee. First, the state government confirmed the land was available. Second, the pledge to begin construction soon after loan was made available. Finally, the implementing agency certified that initial planning preparation was completed and the project was ready for construction. First payment of \$128,000 was made on 12.3.86 to the state. This was on the same date when instrument of loan agreement completed by the Treasury and State government."

Despite the assurance to begin construction after the loan approved, it did not start until 1994. 'Rawi', one of the programme administrators in charge of the project at the state level provided information to complete the narration about the loan application of this project as follows:-

Rawi, "...in early 1992 the implementing agency estimated that the total cost for this project was about \$3,300,000 or the average of \$33,000 per unit. This was because the number of houses proposed to built has been increased from 50 to 100 units. Because the loan approved in 1985 was far lesser than the new estimate of project cost, then an additional loan has to be made to the federal government. Also, during that period, there was a proposition to revise the maximum selling price of low cost housing. Re-application for an additional loan was made the Ministry on 11.7.1994. Instead, the state still stick to the original target of 50 houses. The total project cost was estimated about \$1.6 million or the average of M\$32,000 per house. Therefore, an additional loan of \$500,000 was needed. Although the additional loan has yet not approved by the central agencies, the state proceed with the advertisement of tender. When the state closed the construction tender bid in September 1994, the lowest bid received was \$33,000 per unit."

'Chali' who was the programme administrator for this project between 1991-1995 concluded :-

Chali, "The main problems of this project were indecisiveness of the state about the site due to political interference, wrong choice of site and the SHD was weak to influence politicians. So far, the state can't proceed with this project because the Ministry had decided not to revise the low cost housing's maximum selling price. Therefore, the maximum loan can be obtained is only M\$25,000 per house. The state has to find funds from its own sources if to proceed with this project. "

The *Bamboo Splinters* project had achieved the loan approval stage. Its loan application was approved on 22.4.1980 by the TCOHL.⁽¹⁵⁾ However, this approval was made almost at the end of the 3MP, therefore the project had to be continued to the next five year plan. A sum of \$1,249,688 was approved for this project, but only \$349,912 (28%) were made for the 3MP while the balance of \$899,776 were to be spent during the 4MP. Since the project did not achieved much progress, only a small portion of the loan was spent in 3MP.

Slow Projects

The loan application for the Risefield project was submitted to the Ministry at the end of 1982. The SEDC (who acted as the implementing agency for this project) advised the SHD to apply for M\$1,941,925 (an average M\$19,419 per house). NHD, the agency who advised the Ministry, recommended a loan of \$18,200 per house. However, when the TCOHL met in early 1983, only \$1,720,000 was approved or an average of M\$17,200 per house. The amount of loan approved for this project was therefore lower than the amount requested by the state.

Only six years later, in January 1989 did the construction began. But, another problem arose; construction progressed very slow. Dissatisfied with the contractor's performance, the state refused to renew the contract when it ended in September 1990. Another contractor had to be appointed to complete the project and certain procedures had to be followed. As the consequences, the time spent on this project become longer and the cost also increased. An additional M\$700,000 was needed to meet the project cost. To overcome the shortfall, the state requested an additional loan in 1992. The TCOHL only recommended M\$600,000 for this project. Constrained by the policy of the maximum selling price of M\$25,000 per unit, a lower amount of loan about

M\$23,000 per house was therefore approved for this project. The programme administrator for this project explained:

Chali, "...To overcome inadequate of funding for this project, the state has to utilise its own funding. But the state can't go on like this. If more projects to be like this, the state will end up with financial burden. Although the construction cost for this project is about M\$23,000 per house, the total cost has exceeded more than M\$25,000. Yet, we can't sell houses more than M\$25,000 because of the current policy.⁽¹⁶⁾ What makes the project cost exceeds M\$25,000 is because the land cost is expensive,⁽¹⁷⁾ the infrastructure costs are also high and in addition we have to make contribution fees to the utility agencies. Although this is a low cost housing project - where we expected only minimum planning standards and minimum requirements. In opposition to our expectation, the standards set by the technical agencies are high. They imposed almost the similar standards as other projects [private housing and non low-cost housing]."

Loan application for the Trunkville project was made in June 1979 but rejected by TCOHL because an allocation of funds for this project was not available. This project was not in the list of newly approved projects for the 3MP Review. To accommodate the project, the state cancelled its three other projects under the 3MP. When the TCOHL re-considered the loan application, the state was asked to bear the infrastructure and supervision costs for this project from its own funds.

The loan approval process for the Blind Pheasant project was irregular because it was approved in advance prior to a formal application to the central agencies. The loan was 'approved in principle' by the Deputy Minister of Housing and Local Government when she visited to the state in 1984. Later, when a formal application was submitted to the Ministry in July 1985, a loan of M\$4,500,000 was approved for this project. This loan approval was made towards the end of 4MP, and thus, the construction had to be continued to the 5MP. The loan was adequate to cover the total project cost because construction has began immediately after the loan was approved although this was higher than the estimated project cost set early in the plan.

The loan application for the Swampy Village project was forwarded by SHD to the Ministry on 18.7.79. The state government applied for a loan of \$1,741,500. The loan was based on the estimated project costs of an average of M\$9,165 per house. This amount excluded costs for water and electricity supply, and the cost for road and drainage since these costs were to be borne by the state government. One month later, the TCOHL approved and recommended to the Treasury the amount requested.

Finally, a loan of \$1,741,500 was approved by the Treasury and the decision was conveyed to the state government on 18.10.1979.⁽¹⁸⁾ The criteria used to consider for the loan was explained to the state government' representative who attended the meeting, when the case was presented before the committee. One of the main considerations was an assurance from the state representative that the project would start soon after the loan approved. Then, an agreement was formalised and the first instalment of \$300,000 from the loan was made by the Federal Government in February 1980.

Examples from the Swampy Village and Blind Pheasant projects show that as the consequences of delays in loan applications, their approvals being made towards the end of the five year plan. Thus, the projects had to be continued into the next five-year plan.

Average Projects

An analysis of loan application and approval for the average project shows that six projects had secured their loans during the second and third year of the five year plan. While one project, the Coral Capes obtained loan during the fourth year and two projects, Barkings and Ficuswood, attained this stage during the final year of the five year plan.

Hotville project (formulated for the 3MP) had loan approval in 1978 when the central agencies were given an assurance that the site for the project was available and the project could start immediately when the loan was approved. The state went on with the advertisement to call for construction tenders, without waiting the approval from the Treasury and completing loan agreement. When the loan agreement completed, the state immediately continued with award of tender to a successful building contractor. The construction of project began immediately after that. This had shortened the time at the resourcing stage.

The Pumpkinville project was formulated in the 5MP and secured loan approval in 1988. The M\$1,600,000 loan approved for this project was inadequate to cope with the construction tender of M\$2,088,000. Despite the shortage of funds the state went ahead with the project and utilised 'the revolving funds' to finance the project.

For two average projects of 4MP (Manor and Whiteville) "*applications were made on time.*"⁽¹⁹⁾ Loan application for Manor was made in October 1982 and was approved at \$1,500,000. Three months later, the state's tender board made a decision on the tender application of \$1,400,000. The amount of loan provided for this project was adequate to cover the construction cost and other payments. In addition also, the loan withdrawal was given in the 'lump sump' of M\$1,500,000 to the state government. Another project, the Whiteville proposed to build 237 houses on the ex-mining land. After the technical feasibility studies and consultation with various technical departments only 197 houses were found feasible. The loan application of M\$3,000,000 was made in late 1982. Since the NHD was the implementing agency for this project and the agency advised the Ministry on project costing, the full amount was approved. When construction began in early 1983 and was completed in early 1986, only 194 houses built with the total cost of M\$3,200,000. The state has to absorb the cost about M\$200,000 for the of contribution fees and other payments.

SEDC which was the implementing agency for the Ficuswood project estimated that M\$14,000,000 needed to construct 400 houses for this project. Application for a loan was made to the Ministry in 1984. The Ministry evaluated the application and recommended to the TCOHL a loan of M\$9,700,000 only. This amount was lower than the requested put forward by the state. Considering the stable financial situation of the state, the TCOHL was in the opinion that the state could cope with the M\$4 million shortages.⁽²⁰⁾

The Barkings project received better attention and support because it was the first project involving co-operation between the newly established NHD and the state government. In contrast to the Ficuswood project, its first phase development had been started even before the loan being approved by the central agencies.

Fast Projects

The times when fast projects reached the stage of loan approval, ranged from before the launching of the plan to the early fourth year of the five year plan. Long Sand project had loan approval even before the starting of 4MP. Loan application for Manor project was approved during the second year of the project implementation. For the Lumber Junction project it was in the third year while for Knee Lie it was in the fourth year of the 4MP.

The application for loans for the Knece Lie project was made in 1978 for M\$772,000. But the Ministry only recommended \$750,000. The TCOHL rejected the application because adequate information was not provided to the committee and in addition the state did not agree with underestimate of the project costing. Between 1978 to 1980, Malaysia experienced a property boom and as a result construction costs escalated rapidly. Another estimate was submitted to the Ministry in early 1979 and then a loan of M\$825,200 was approved for this project. When bidding for tenders after that, the construction cost was higher than the amount of loan had been approved. To accommodate the increased project cost, an additional loan was requested in 1981. The total loan provided for this project was almost M\$1.2 million. In addition, the state also used its funding for the payment of land compensation and contribution to utility agencies. The factor that pushed this project towards completion within the plan was because it was among the few projects of the newly formed NHD for Negeri Sembilan.

Loan approval prior to the beginning of a five year plan was given to the Long Sand project. A respondent involved in this project described as follows:-

Baker, "This project was one of the 10 projects proposed by the state of Negeri Sembilan to be included in the approved projects list for the 3MP mid-term review in 1978. Because of the submission was late, the Estimate Sub-Committee of NDPC⁽²¹⁾ decided projects from Negeri Sembilan were to be included in the 4MP rather than the mid-term review of 3MP. The sub-committee gave their green light to the state to go ahead with this project by taking necessary actions to initiate the initial implementation for this project. A funding of \$11,000 per unit was made by the committee. About six months before the launching of the 4MP the state submitted loan application for \$15,000 per unit. The state was acting on the advice by its implementing agency that the proper total estimated cost for this project was about M\$1.5 million.

The state was informed about the criteria for loan approval. In fact when the technical committee [TCOHL] met, the state representative was attending to present loan application and to defence the project costing. As usual the loan approved by the committee was lower than the amount asked. Later it was found out that the financing was inadequate. The lowest tender bid received from contractor was \$1,021,600. This did not include contribution fees for electricity and water."

When asked why the loan approved was lower than the amount requested, another respondent explained as follows:-

Halo, "The states usually jacked the costing higher so that when the loan was trimmed down through the process, they got close to the amount they intended

for. Another reason was aimed to maximised the usage of federal government funds, so that more projects could be accommodated."

But why additional loan later needed?

"Delays in project take off caused the approved loan burst because of the cost increase. Contractors also added in element of extra percentage to absorb their losses because government was also considered a bad paymaster."

Although the Long Sand project is one of the projects categorised under the fast projects it also faced difficulties in getting the right amount for financing. This project was estimated to cost about \$1,530,000 but the amount of loan approved was only M\$1,490,000.

General Remarks on Loan Approval

Several respondents were the opinion that the policy on cost limits such as the maximum loan of M\$25,000 per house, constrained the programme.⁽²²⁾ This was because the average cost per houses was usually more than the cost limit set by central agencies. They pointed out that this was why many projects in the past had to request an additional loan. In relation to this, one respondent described as *"over controlled but short-sighted of the problems on the ground."*⁽²³⁾ Another respondent, who is a programme administrator at the implementing agency, pointed out *"...all problems include tailoring to the cost limit set by the amount of loan approved for a project is passed to the implementing agency to solve it."*⁽²⁴⁾ This problem had occurred over several plan periods as a respondent pointed out *"...the similar problem had also occurred during the past five year plans projects, it was of course, the loan provided by the federal government was lower than the actual total project cost, because of there was an understanding that a certain amount of cost had to be provided by the state government. Also certain project components were to be borne by the state government, such as the land and infrastructure costs."*⁽²⁵⁾

On the other hand, respondents from the central agencies, viewed the state governments as apathetic to this programme. This was demonstrated by the initial planning problems such as site selections, squatters problems, changing of project scopes and priority and weaknesses in command of departments under the state control.⁽²⁶⁾ These respondents were in the opinion that this problem could have been overcome by the states.

'Ras' a programme administrator at the Ministry, whose responsibility was monitoring project progress and liaison with state governments pointed out that:-

"The State governments feel very sensitive when federal Treasury imposed that before fund could be withdrawn they have to verify the project's progress through making visits. To state government this indicates as 'distrust' feeling of the federal government and senses as over control. This was because the fund was provided in form of 'loan'; whatever happen, the state has to pay back. Therefore the states should be given a more freedom like in the pasts. Although in the past plans federal agencies had made visits, but they were not the prime emphasis when to make payment for loan withdrawals. It was adequate just by certification of the superintending officer [project's engineer] in charge of the project. In fact in the past there were many projects where 'advance payments' made by the federal Treasury. Certain amount of the loan can be withdrawn while waiting for the agreements between the two government being formalised.

In 4MP there were several projects which loans were disbursed even before the agreements were signed (e.g. Trunkville project). The justification for this act was because some of the projects were called for tender even before getting loan approval from the TCOHL at the MHLG. That was why the committee made the statement in 1982 it was very upset with this practice and warned states not to call for tenders before the loans were approved by the committee.

PROJECT COST

The amount of loan approved is related to project cost. This is because project financing is dependent on the money obtained from the loan provided by the federal government. Under this sub-topic the researcher attempted to investigate whether there was relationship between construction cost and the approval process. During the research formulation stage the researcher believed that the programme implementation performance is influenced by the procedures of development approval process; longer approval process causes higher construction cost.

'Chali', one of the key respondents at the state level described that the pre-determined project cost is only valid if the project fulfil most of "favourable criteria". 'Chali's' point of view was also shared by other respondents who were involved in the programme 4MP, 5MP and 6MP.⁽²⁷⁾

Chali, "...in terms of the amount loan approved for the project is varied from one project to another. In the ideal situation, where we do not face

site problem, change of site, change the type of house to be built, when the site is close to main road and close to other infrastructure facilities, then the amount of loan provided is always adequate. In the case where site is not favourable; hilly or swampy, where it needs a lot of filling or cutting, it cause increases to the cost for site preparation. This always occurred to the state land. Because state land is now limited. Sometimes, we have to pay compensation if we acquire the private land. In general the maximum loan of \$25,000 per house allowed by the federal government is inadequate to cover the total cost of low cost housing development. Based on these projects [Risefield and Muddy Canal] they had costed us for more than \$25,000. This was happened because the increased cost on site preparation, additional cost due to improved standards imposed by technical departments and increased payment on contribution money to utilities agencies.

Uncompleted Projects

Three of the uncompleted projects (Muddy Canal, Broken Mound and Bamboo Splinters) were facing problems of higher project cost than the amount of loan approved, while reasons for cancellation of two other projects (Three Mile Stone and Black River) have been described in the discussion on the programme preparation.

Acted on the advice of the implementing agency, the SHD applied a loan for project Muddy Canal Project in 1983 for \$18,200 per house.⁽²⁸⁾ This project costing was considered on the higher side than the cost per unit that was normally approved by the central agencies (between \$11,000 and \$14,000). In 1983, the total cost estimated for this project was about \$1,200,000. It was planned that construction works would begin soon after the loan was approved by the TCOHL. However, delays had occurred, due to the problem of site selection for this project. When tenders were received in 1994, the project cost increased to M\$33,000 per house.

Broken Mound project had reached the construction stage but was cancelled and transferred to the 'Special Low Cost Housing Programme' in 1990. The project was facing delays in construction because of the building contractor was incapable of finishing the project. After the state terminated the contract, the state was not capable of meeting the additional project cost to complete it and decided to cancel this project.

The project costing for project Bamboo Splinters was made during the 3MP, when the SHD submitted application for a loan approval. Delays occurred to this project due to the problem of site selection. Therefore the project costing and the amount of loan approved were not valid when construction work was to begin. It was

realised that funding was inadequate because the cost of earthwork contract was a substantial amount. For this project the earthworks contract was made by a negotiated tender. This practise differed from the usual. The implementing agency was negotiating with the contractor on the amount of contract price and the estimated project cost. Finally a tender of \$2,394,768 was awarded to the contractor for earthwork of 60 acres which included the implementing agency's own project, out of that, about 12 acres were for PLHCP's project.⁽²⁹⁾

Slow Projects

The awarded tender for the Risefield project was higher than the amount of funding approved. Increased in cost was due to slow project 'take off'. The construction for this project only began in 1989 but progressed very slowly and was almost abandoned. Delays in starting and completing the project caused the project cost increase because the contribution costs to the utility agencies had increased.

The original costing for the Trunkville project was made during the 3MP. Delays in implementing the project caused an increased in project cost. To meet the project cost an additional loan was requested to the central agencies. The central agencies also directed the state to bear half the infrastructure cost and a quarter of the supervision cost.

Estimated costs for Swampy Village were prepared by its implementing agency during the 3MP. It was prepared in accordance with the cost limit of \$8,000 per house which was the effective cost limit at that time. The provision for water and electricity supply was not included in the cost because, in the past, these costs were absorbed by the utility agencies. The loan provided by the federal government was not adequate to meet the project cost. The actual tender was higher than estimated cost because of delays in calling tenders and at the time the construction industry was experiencing a boom. In addition utility agencies changed their policies and imposed fees for electricity and water supply.

The cost for project Blind Pheasant increased from the original estimate because the construction had took place beyond the original five year plan period. The state was indecisive on the question of when to implement and which implementing agency to be appointed for this project.

Average Projects

Pumpkinville project *"...when we submitted loan application in 1988, we requested a loan of about \$20,000 per unit. The project costing was prepared by our implementing agency. But it was approved about M\$1.6 million or M\$16,000 per unit."*³⁰ When asked why a lower figure was approved, the programme administrator "suspected"³¹ that, *"...probably because we were still influenced by the recession. We did not anticipate that recession ended soon by the following years which the economy was picking up very well. It has impacts on the construction industry in general, and specifically increased cost to this project. When the loan was approved, construction was not taken place there and then, of course there was some times lapsed because we have to call tender and fulfil certain [administrative and financial] procedures."* As the result, the lowest tender bidding from a building contractor for the project was about M\$2,100,000 or the average of \$21,000 per unit. Apart from the construction cost, some other costs were added to the total project cost such as contribution fees to utility agencies, management fees to the implementing agency and extra costs because of additional requirements imposed by technical departments. Total cost for this Pumpkinville project, which was completed in 1993, excluding land, was about M\$2.3 millions, the average of M\$23,000 per unit.⁽³²⁾ To overcome inadequate funding the state applied for an additional loan after the project was completed. The additional loan was approved because the total loan was still below the maximum limit of M\$25,000 per unit.

During the 3MP, when the state's financial situation was stable and much of the state's focus was on this programme, the state was ready to use its own funding when the project faced difficulties with inadequate funds. This was illustrated by the Hotville project.

" This project was estimated by the SHD to cost about M\$8,000 per unit in 1978. When the project costing was prepared by the implementing agency, the estimated cost was about M\$14,000 per unit. The state proceed with the construction, although the tender price was higher than the amount of loan approved. The funding still inadequate to cover the total cost, even after the state asked for additional loan. The state was capable to make up difference because the state was in a strong financial position during that time. Moreover, the state's policy of giving priority for the low cost housing."
[Baker, 5.12.1994]

A similar stance was adopted by another state in the same 3MP, as illustrated by the Lakesland project. This project was among the few large scale housing

development project in the programme. The project aimed to build more than 1,000 houses, constructed in three phases of development. The estimated average cost per house was about M\$8,000. The loan approved by the central agencies was about M\$4,600 per unit. The lower amount of loan was approved because timber houses were thought to be cheaper and in addition also the state was to bear all infrastructure costs (from its own sources and also utilising allocation from other programmes). The construction tender price was about \$5,600 per unit. The original allocation of funds was M\$9,000,000, but the loan approved was only M\$5.7 million.

Fast Projects

When application for loan was made for the Lumber Junction project, the estimated cost was put higher than the amount approved by the Treasury. The Ministry trimmed down the cost approved after the advice by the NHD. When the project was constructed, the construction cost was higher than the amount of loan allocated. As the result the state had to submit an application for an additional loan to the central agencies through the Ministry. Similar problem was also occurred to the Knee Lie and Long Sand and where the estimated project cost was higher than the actual loan approved by the central agency. Although these projects categorised as fast projects, they too faced difficulties on shortage of funds where the state had put up requests for an additional loan to settle the remainder payments to the contractor.

Issues raised on project cost

1. Central agencies were inclined to approve lower funding than amounts requested; as a consequence, projects faced financial difficulty because of higher construction cost and inadequate funds. To overcome this, additional loans had to be requested from federal government or the states have to bear the cost from their own funds.

2. The amount of loan provided were adequate if projects had immediately proceeded to the construction stage. Delays in commencing construction made the amount of loan provided no longer adequate to cover project costs. This implied that slow projects had higher project cost increases when compared to fast projects. Therefore, good estimate and proper preparations were important to fit within the constraints set in this programme.

3. The Federal government controlled the amount of loan for the programme and states had to build houses conforming to the amount approved.

4. The states ran the risks of having to find additional funds if the loan provided was inadequate.

LOAN WITHDRAWAL

Project resourcing involves obtaining finance for the projects. After the loan application is approved by the Treasury, and when the agreement is formalised, the state may apply for loan withdrawal. Withdrawals are based on progress and the amount of money is paid according to the progress achieved for the project. The difficulties faced at this stage can be described from an interview extract as follows:-

“I have the feeling that state are reluctant to do housing projects because of the strict procedures involved in project financing. They are very concerned about loan withdrawals. For example like(states) has requested that all loan withdrawals due for all projects are to be made immediately to the state's Treasury. But the federal Treasury refused to make any payment until the provisions in the agreement revised between the two parties. This is in view of the loan extension period has been expired. This is one of the items contained in the agreement. Although the state government may be allowed to extend the duration, but its up to the period of 6 months only. The amount of withdrawals are depending on the project progress. Therefore, many projects stuck in getting the withdrawals; unless these project completed within six months or the federal is willing to negotiate amendment to the provision in the agreements. It is important that the programme administrators understand and investigate the content of the agreement. Although this (states) will not facing much problems to fund its projects if the balance of loan withdrawals are not to be paid, this is more than enough to discourage the state to proceed with this PLCHP in the future.” [RAS, 14.11.1994]

Discussions about the same subject with the programme administrator at the state level has provided perspectives about loan withdrawals from the state's point of view.

“This state is capable to fund its projects because the state does not entirely depending on loan allocation from the federal government. The state also has allocated funding for each year to advance project financing. The finance obtained from the loan withdrawals serve to pay the revolving funds advanced for the project. The two implementing agencies used by the state, the PWD and NHD depended on this budget allocated by the state government. But for projects implemented by SEDC did not face financing difficulty³³. The SEDC has advanced from its own funds to pay projects' progress payment to contractors, and later submit claims to the state government. SEDC imposed

7.5% service charge on top of the amount paid. In general projects did not face problems through this arrangement.

However in general I've seen that the process of loan withdrawal now is becoming more difficult. In my opinion, this is occurred because procedures involved become more strict. This state currently has loan instalments about M\$10,000,000 which are still unable to withdraw from the federal Treasury. When the loan withdrawals become difficult, the money receive by the state will be slower and also it has reach the end of the "extension period". This makes the loan lapse and a re-negotiation between the state and federal is required. This will require a signing of new loan agreements.

Many detailed information are required by the Federal Treasury when the state submits applications for loan withdrawals. In the past loan withdrawals involved just between the State Financial Officer and the Treasury. Now, this process is involved the application to be submitted to the Ministry who will make further recommendations to the Treasury. The Treasury checks by visiting the project and in addition checks on the payment of current annuity from the state to the federal government.

Except in the case where we have personal contact, then the process is less tedious. Previously the officer who in charge payment for the loan withdrawals, was the officer who had the involved in the programme at the district level. He understood the problems and issues of this programme. It helped in expediting approvals of loan withdrawals and payment to the state. But this is not the normal circumstances, because this circumstances not always the case.

When making application for loan withdrawal the officer in charge at the Treasury insists for every detailed information which sometimes they are not with us. This information is only available with the implementing agencies. When additional information required by the Treasury, we have to contact and rely on the implementing agencies. This additional steps in the process caused additional time in the implementing process.

Although the Treasury made visits to the projects before making payment to loan withdrawals but I think that the person in-charged at the Treasury does not have enough time to do this for all projects. He has to deal with withdrawal applications not only from this state but also from thirteen other states. This has caused delays in loan withdrawal process."³⁴

Although the preparation of the annual budget was based on the assessment by the central agencies, the annual allocation was always adequate to meet loan withdrawals. One respondent clarified that, "...the annual allocation of funds provided by the Federal government were always more than adequate because the amount of loan withdrawn every year was lesser than the amount of annual allocation." He cited an example in 1983, where a total of M\$900 million loan was approved but less than

50% was utilised by the state government, through loan withdrawals. This occurred because: (a) it was difficult to claim the approved amount; and, (b) delays in project implementation caused lesser expenditure of project allocation.

Uncompleted Projects

Four out of six uncompleted projects had made loan withdrawals and some of the payments were made by the Treasury to the state governments. The first payment for loan withdrawal of *Muddy Canal* project was made on 12.3.86 and amounted to M\$127,718. This payment was made on same day when the instrument of loan agreement was completed between the Treasury and the state government. The First loan withdrawal for *Lancott 2* project was approved by the Treasury and payment was also made because the project was ready to take off and tenders for work had been received from building contractors. *Broken Mound* and *Bamboo Splinters* projects were provided with a certain amount of payments through a number of loan withdrawals before these projects being cancelled by the states. *Bamboo Splinters* project had withdrawn almost \$1.15 million from the total amount of \$1.2 million loan approved.

Slow Projects

Two loan withdrawals for the *Risefield* project were made in 1984 and 1985, which were used to pay for the cost of land compensation. After that there was not any withdrawal until 1989, because the project had been 'slowing down'. Delays also occurred to loan withdrawals in 1989, due to calculation errors put up by the SHD. Although the state requested a higher sum, only a lower amount released by the Treasury, because the project progressed very slowly. Towards late 1991 the state requested the balance of the loan, but, this was refused by the Treasury on the grounds reason that "the extension period allowed was lapsed". Therefore, a supplementary agreement had to be signed to enable further loan withdrawals.

Withdrawals of loan for *Blind Pheasant* project were made every year after the agreement had been signed by the two parties. Adequate cash flow for the project was made by the central agencies.

Other Projects

The following excerpts, illustrate loan withdrawals for the average projects. For *Pumpkinville* project "...withdrawals never faced any difficulty, the money requested is always available."⁽³⁵⁾ On another project, the *Lakesland Village*; "...the

first withdrawal of \$600,000 was made after the loan approved, in spite of loan agreement was not signed. This showed the flexibility on the procedures adopted by Treasury in 4MP. A year later another M\$4,200,000 was paid to the state. All the M\$5,600,000 loan money was paid to the state by the end of the plan.⁽³⁶⁾ Another average project, the *Ficuswood* “..the loan approved for this project was M\$9,700,000 but because the project involved three phases of development where two phases completed at the end of 5MP. Also the loan extension period has expired in 1992. Therefore only M\$5,800,000 was withdrawn from the total loan approved by the middle of 1992.”⁽³⁷⁾

Fast projects also did not face difficulties with loan withdrawals. *Knee Lie Housing* “...although additional loans were requested from the federal government, they were approved in time with the construction progress. The project did not face much difficulty with withdrawal. Payments almost received on time as requested. Therefore, we ought to pay the contractor as the project progressed.”⁽³⁸⁾ For *Manor* project, the payment was made in one lump sum of M\$1,500,000. It was found out that in certain cases, the payment was made in a single lump sum because the construction had been completed when the application for withdrawal was made.

A few respondents pointed out that the state governments feel “dissatisfied, very sensitive and embarrassed” when the Federal Treasury required officers must verify the project’s progress through making visits to the projects before a loan withdrawal can be paid by the Treasury. In the past loan withdrawals were progress certification by the project engineer and programme administrator at the state level. They pointed out that projects were financed by loans and that state were required to pay back the loan. Thus freedom must be given to the state. The state governments observed this new imposition as a “sense of distrust attitude” by the federal government towards the state governments. In addition, they saw the Treasury is playing a role as not only as financier but, also as controller. This ruling also meant additional time was needed for withdrawal of loans.

When this issue was put to one of the officers at the central agency, he explained that the new ruling aims to protect the federal government’s interest as the project financier of the programme. A clause in the agreement and other government circulars allowed such practice. He further clarified, that central agencies were not “very happy” after a visit to few projects which progressed very slowly, were not completed on schedule and not progressed as promised. Hence, Treasury has imposed

a more strict conditions to the payment of loan withdrawal application by the state government.

A programme administrator at the MHLG commented that, the Ministry was in a difficult position as a consequence of this new ruling about loan withdrawals. This was because the ministry serves as a “co-ordinator and middleman” to the projects being implemented by the state. It was on difficult to impose condition on states and at the same time ask for payment. But, the Federal government is view this is the role that the MHLG to play; the federal agency must visit and certify projects before allowing any loan withdrawals

SUMMARY ON PROJECT RESOURCING

As described in this chapter, projects’ fund allocation was usually granted to states at the beginning of the five-year plan, based on average estimates of project cost per house for each of the plans. Allocation of funds to each state was made on criteria such as: the state’s past trend in implementing the programme, their willingness to implement projects, and the availability of land for their proposed projects. Then, during the five-year plan’s mid-term review additional projects and funds were considered by the states. However, problem arouse because of the following:-

- **First, the imposition of the “top-down” perspective programme resourcing, where there was project cost limit set by the federal government which determined the amount of loan approved and the maximum selling price imposed on the low-cost housing. Violation of the cost limit by a higher project cost than the permitted selling price resulted in the states bearing the differences from their own funding.**
- **Second, the federal agencies were inclined to approved lower amount of loan than the amount requested. Based on the cases analysed, difficulty arosed as the result of lower amount of loan approved.**
- **Third, inadequate funding was the result of delays in completing the planning stage and these caused delays in starting construction. Delays in starting construction resulted in increased project costs because of inflation. The amount of loan approved for the project became inadequate because of the escalating costs.**
- **Finally, the provision of the PLCHP funding in the form of loans was considered “discouraging and burdening”, when comparing with other grant allocations.**

Project financing in the form of loan was considered difficult because of the lengthy procedures involved besides “the hassle to collect payments from buyers.” In addition, the loan withdrawal process had increasingly become more difficult because of added steps and strict procedures imposed by the federal Treasury on the loan withdrawals requested by the states.

Overall the main theme involved in this resourcing stage is that of a lengthy process, tighter procedures and inadequate funding provided by the federal government.

THE CONSTRUCTION STAGE

Introduction

The major activities in the construction stage includes the construction work from the beginning until completion. In addition, it involves a variety of other sub-activities such as the preparation of tender documents, advertisement of tender, evaluation of tenders submitted by contractors, decision on the tender by a tender boards, the appointment of contractors, supervising and monitoring the construction, making progress payments to contractors, making amendments to the project, and finally the certification of job completion.

It is generally true that project ‘take off’, or the beginning of construction, usually takes place immediately after the ‘resourcing stage’. However, in order to expedite the process project construction had sometimes started earlier, as explained by one respondent:-

“Usually this department [SHD] does not wait until the release of funds from Treasury to start works. Once the project loan have been approved we will commence project construction while application are made to Ministry for the loan to be released. If it was to wait for the agreement stage cleared, delays in project take off may occur. We can commence the project by utilising the money from the revolving funds while waiting for the release of funds. When the loan withdrawal is released by the Treasury it be recouped to the revolving funds” [Kas]

When the loan has been approved by the central agencies, the SHD and its implementing agency will begin to appoint contractors. First, the implementing agency prepares the tender documents and then contacts at least two newspapers to advertise

the construction job. Contractors interested in the job will purchase detailed tender documents from SHD or the implementing agency as specified in the advertisements. The document of tender consist of the following items:- ⁽³⁹⁾

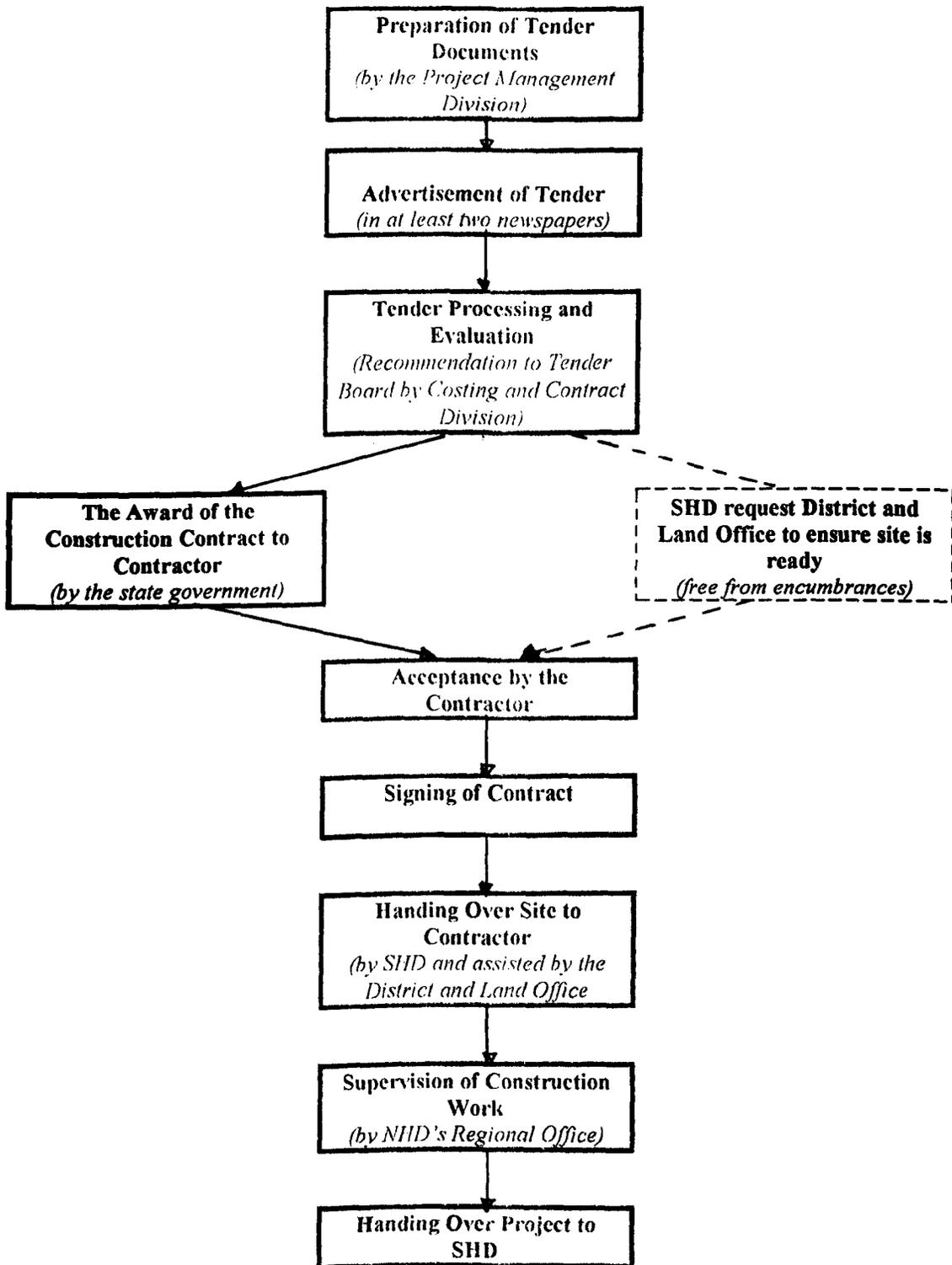
- (1) Form of tender
- (2) General specifications
- (3) Project's specifications
- (4) Schedule of rates
- (5) Project drawings

Contractors who apply for the project must complete and return these documents to the SHD within the specified date and time. When the state receives these bids, it requests the implementing agency to evaluate offers. The implementing agency will recommend a contractor or contractors who offer the contract price within "the appropriate price" that is assessed by the implementing agency. The state tender board then makes a decision and selects a contractor. After the contractor is appointed a contract is signed between the state government and the contractor. Construction begins when the site is handed over by the state government. It is the responsibility of the SHD, with the co-operation of the District and Land Office, to clear all land matters and evict squatters before they hand the site over to the contractor. Unsolved land matters may cause delays in starting construction.

To help readers understand this process, Diagram 9.1 illustrates the general process adopted by the National Housing Department.

In Malaysia, almost all of construction of public projects is conducted by private contractors. The main role of the implementing agency is to supervise the contractor. Many respondents pointed out that at this stage the implementing agencies have more direct control over the project and the outcome is more predictable than at the previous stages in the whole project's implementation process. When reaching the construction stage the project is considered secure. However, several problems also arise during this stage. From the implementing agencies' point of view, two factors cause delays in construction: the capability of the contractor; and unpredictable changes to project specifications.

Diagram 9.1:
Illustration of the Work Flow Involved in the Construction Stage of the National Housing Department



To appoint a capable contractor is crucial for a project to be completed within time. There were several cases of contractors who were unable to complete their work on time and who had to ask for extensions. Also, there were a number of cases where contractors abandoned their projects, requiring the appointment of new contractors. In some cases, government agencies were also responsible for delays in making progress payments which caused problems for contractors in meeting payrolls and in the purchase of building materials.

Unanticipated changes to project specifications occurred, in the instances where technical departments imposed new requirements or changes to planning standards. These changes mean that additional time was needed to complete the project due to the disruptions or waiting for further action involving new drawings, amendments to the contracts known as 'variation orders to project specifications' and re-negotiations of tender prices with contractors.

Uncompleted Projects

Broken Mound is the only uncompleted projects which reached the construction stage, but had to be abandoned halfway by the building contractor. The normal practice in reviving an abandoned project is to appoint another contractor to complete the job. For this the state government had to comply with certain procedures and this meant that additional time was needed and there was also an increase in cost. To overcome this cost increase, the state had to apply for an additional loan. The programme administrator for the project reported that the state government was reluctant to revive this project, in view of the procedures involved. This project was later transferred to 'the special low cost housing programme', a privatisation programme which involved a joint-venture between the state government and the private sector. When the project became privatised, it escaped the usual bureaucratic red tapes and was not required to conform to the usual procedures. The programme administrator explained:-

"After faced with construction failure this project was transferred to the special low cost housing programme. This is a privatisation programme of the low cost housing project. Under this arrangement, the state provides land whose current value is capitalise into the project cost. The private sector undertook development for this scheme was responsible to obtain financing to revive the project. Under this, the state government did not worry about project funding because the private developer will take care of it. The state government also do not have to worry about collection of repayments from

house buyers. Under the privatised project, houses are directly for sale where buyers have to borrow from financial institution.”

Slow Projects

Four of the five slow projects faced some problems during the construction stage. Delays that occurred during the project preparation had caused further delays at the beginning of the project construction. In contrast to the Broken Mound project, as has been described above, two of the slow projects, the Risefield and Gingling projects appointed new project contractors, when their first contractors failed to complete the construction job.

For *Risefield project* in early 1989, the state government appointed a construction company to carry out project construction. The construction was intended to be completed within 14 months. The construction progressed very slowly and not to the satisfaction of the implementing agency who supervised the project. Considering appeals from the company and the promises to expedite construction, the state twice agreed to extend the project construction for eight months. When the contract period expired in March 1990, an extension was granted until June 1990 and then another extension until November 1990. Despite several extensions the contractor failed to complete the project. Unable to tolerate such delays and poor performance, the state decided not to renew, when the contract period expired in November 1990. Attempts to overcome the contractor's poor performance were made through meetings between the implementing agency, the state financial officer and the contractor concerned. The effort seems ineffective because the contractor was merely 'buying time and engaging in delay tactics'⁽⁴⁰⁾ in the attempt to hide an inability to execute this project. The project was lying idle for a quite sometime while awaiting actions to appoint another contractor. After fulfilling the necessary procedures, the state appointed another contractor to complete the construction. This cost the state an additional M\$713,000 by the time the project was finally completed in the middle of 1993.

Trunkville project experienced a 'sluggish' progress according to a respondent who monitored this project.⁴¹ This was because the project faced squatters problem. To overcome the squatter problem, the project construction had to be implemented in two phases of development. One hundred houses were constructed in the first phase, while in the second phase only 178 houses were built instead of the 200 houses intended. The construction tender award for the first phase had to be cancelled by the state tender board, after the contractor selected was found to be

inadequately registered with the state's tender board. Following that, another tender process had to be carried out. When the contractor was appointed, delays occurred as a result of waiting for plan amendments by the implementing agency to be agreed by the SHD and other technical agencies. Therefore, the target date to complete the first phase was not achieved. Preparation for the construction of the second phase was also time consuming. The construction tender was only advertised 1986, almost four years after the completion of the first phase. Several interruptions occurred during construction due to several amendments such as "variation orders" to the contract by the SHD and amendments to the project details which were imposed by the technical departments. For example, while constructing the project the Water Department requested the water supply pipe for this project to be amended from a 200 mm to a 300 mm type. These type of changes required amendments to the contract, which significantly increased the cost and required an extension of the construction period.

For *Gingling project*, a contractor was appointed in May 1980 by the state government. But work started much later, only in January 1981. After that the construction had progressed very slowly. The construction was scheduled to be carried out within 14 months but failed to be completed on time. The contractor applied for an extension of contract from the state government. Delays in starting the project were given as a reason for the failure to complete in time. The state government granted an extension of four months (from 8.7.81 to 10.11.81) ⁽⁴²⁾ to the contractor on the recommendation of the implementing agency. However, the four month extension was not adequate because several changes to the detailed project design requested by the SHD. Then another three months of extension were considered and allowed by the state government (from 11.11.1981 to 6.2.1982), but the project was still not completed. At this time, inclement weather was blamed as the main excuse for the delays- a heavy monsoon downpour between November and December interrupted the construction work. ⁽⁴³⁾ A meeting between the SHD, the implementing agency and the contractor was held which discussed approaches to overcome the construction problems which were behind schedule. The contractor requested another extension and pledged to complete the project. Finally a third extension of seven months (from 7.2.82 to 13.9.82) was given. Although a total period of 28 months was given to this contractor instead of the 14 months intended, the construction was still not fully completed when the contract terminated on 13th. September 1982. However, progress payment on the construction amounting to M\$295,000¹⁴ was paid to the contractor. The contractor abandoned the project and informed the state government that the company faced difficulties in obtaining building materials and in addition was facing "internal problems." The contractor paid a compensation of M\$21,000 in lieu of his

failure to complete the project. Finally, the contract terminated when the contract period expired on 13.9.1982.

The process of re-advertising tender of works for the Gingling project was made on 17th. December, 1982. There was a good response from local building contractors, the state received a total of 21 applications. Immediately after this, another contractor was selected and appointed by the state for a contract of M\$375,400. Finally this project was completed in July, 1984. Delays also occurred when the construction was carried out by the second contractor. However, these delays were the result of the longer time needed to overcome the poor quality building construction of the first contractor. About four years were spent on this project. When the project was completed, no electricity and water were provided which further delayed occupation by house buyers.

Blind Phasant project also experienced delays in construction, similar to those of the three other slow projects. The loan application to built 223 houses was approved by the central agencies but this project accommodated only 218 houses when its lay out plan was approved by the Department of Town and Country Planning. The shortage of 5 houses was due to an insufficient land area. The state government agreed a construction price of M\$ 2,247,420 ⁽⁴⁵⁾ and the project was to be completed within 18 months (15.7.85 to 15.1.87). When the contract expired the project had was only half finished. Eight extensions were needed for the construction to be completed on 31.10.1989. The state government allowed these extensions despite the fact that the implementing agency had recommended the termination of the contract.

Swampy Village project began the construction works in April 1979 when the earthwork was carried out by a government's subsidiary company. Then another construction company was appointed to complete the project which involved works related to buildings and infrastructures. This construction was carried out in 1981 and completed on 19.3.1982. However, after the construction was completed, electricity supply could not be provided because the electricity power sub-station was not built. A respondent involved in this project explained:-

"...to our understanding, the electricity supply for this project would directly come from the nearby main cable. We had consulted the power agency on this matter before the project started. We also never had the experience before that a sub-station required for the government low cost projects. This change of requirement was something new and only imposed after construction was completed. We thought that, we could get the electricity supply for the houses as usual or even considered under the rural electrification programme. After all,

the nation's largest power station is just nearby. We had also a strong support from the district officer who was once the programme administrator for this programme. However, the utility agency still insisted on a sub-station despite several appeals made to reconsider this requirement. We had to follow a certain procedures to appoint another contractor to build the sub-station building. There was also time loss due to this procedure. Altogether for this project about four years were spent on construction [1979-1983]. Had we not faced the electricity supply problem, this project would have been completed earlier."

Descriptions of project construction from the four slow projects showed that delays in the implementation process occurred during the construction stage when the fault was mainly that of the contractor. At this stage the project performance is mainly dependent upon the capability of the contractor. However changes in technical requirements imposed by utility agencies can also cause delays.

Average Projects

Whiteville project built only 104 houses instead of the targeted 237 houses intended, because of technical feasibility. The site for Whiteville was proposed on an ex-mining land. Although the land proposed by Land Office during project formulation stage was more than adequate, the technical survey later found that only a portion was suitable for housing construction on the site proposed. Its construction was delayed as a result of some technical problems and the time spent waiting for approvals from technical departments. The construction for this project was intended to take place within 18 months (from 3.1.1983 to 3.7.1984), but the work was disrupted and stopped for a number of months while waiting for a decision on whether the use of an underground electricity cable would be allowed by the utility agency. The state granted two extensions to the contractor between July 1984 and January 1986, because the delays which occurred were not its fault. The problem occurred because of the utility agency; the agency felt it must be consulted and its consent must be obtained when dealing with matters related to its area of jurisdiction or area of its specialisation. The application to build a sub-station for the project's electricity supply was rejected by the utility agency. Representatives of the SHD and the contractor went to consult with the utility agency about the approval and they were informed that the plan they submitted was out dated. These representatives complained to the state government that what was wanted by the utility agency was not clear. The state government directed SHD to solve this problem by calling various parties involved to a meeting to settle the problem. A compromise was achieved when the tone of the meeting's resolution used language which sought co-operation from the utility agency. As a result, the utility agency agreed to construct the sub-station. This was followed by a transfer of funds to

meet the construction cost from the implementing agency to the utility agency. This case shows how problems might occur if all parties involved were not consulted, especially when the party concerned could impose restrictions.

Fast Projects

A majority of respondents involved in ‘fast projects’ stated that, to a certain extent, these projects engaged more capable contractors than other types of project categories.

Knee Lie and *Manor 3* projects used “capable contractors” who had good track records with other NHD projects. ⁽⁴⁶⁾ Construction was completed within the time as planned. One important feature of *Knee Lie* project was that special attention was given to this project. This was the first project of the newly established NHD in Negeri Sembilan. Another first project (Barking scheme) of the newly established NHD in Perak also showed an outstanding construction performance when this project was completed two months earlier than the expected.

Manor 3 project. The construction of this project was completed on time within the intended 12 months. This project did not encounter serious problems because it was built on the site planned for a housing development and as an extension from two previous phases. Two other projects, Lumber Junction and Long Sand were constructed within time as planned because they too were built by “experienced and capable contractors.”

One respondent pointed out that NHD had the advantage of more choices of building contractors nation-wide. This was because contractors registered with the department from all over Peninsular Malaysia. In contrast projects implemented by other two agencies engaged building contractors registered only with these agencies within each state. Therefore, it is said that NHD had a wider choice of more capable contractors.

INTERPRETATION AND CONCLUSIONS

In general, implementation process during the construction stage is more controlled by the state than other stages in the programme. The project construction is carried out by the contractor, under the close supervision of the implementing agency. Monitoring of the project progress is carried out through regular meetings between the contractor, the implementing agency, the technical departments and the SHD.

Problems and issues on the project were discussed and solved through these meetings. Most implementing agencies were confident of handling of projects through this arrangement. There may be differences in details, but Ying's description fits with the accounts of several others on the construction stage in general.

“The construction of the low cost houses does not face so many problems because the implementing agency can really control the construction pace at this stage. Once the tender is awarded the contractor can start the work. Normally at this stage the land problem has already been solved. The practise of this department is to put four personnel in-charge of the project. One engineer who supervises the overall project progress, one technical assistant and two technicians supervise directly the construction work. We have the established project monitoring system. Regular site meetings are also carried out with representatives of contractors, technical departments and SHD. Any problems and shortfalls in the construction can be fixed during these site meetings.

Squatters on the site sometimes can cause the delays if they were not solved earlier before the construction tender was awarded. This needs co-operation from the SHD and land office to evict them. It needs also co-ordination to ensure the problem solved when the construction was about to start. Delays in evicting squatters may cause us to pay compensation to contractors because of holding back their work. This eventually added cost to the whole project.

However problems like an incapable contractor and weather may delay the construction. The tender board should make a proper selection of contractor and to consider someone who has experience and a good track record.

Payments not received on time also may hit the contractor. Recently, contractors purchase building materials from suppliers on a cash basis. This causes difficulties to contractors if he has a weak financial position. This is especially true if he does receive progress payments on time [from the state government].

The wrong choice of contractors can cause the project delays. If the first contractor was not capable then we have to terminate his contract and appoint another contractor. Appointment of another contractor must follow procedure. This would add up to a longer time to complete the project and add the cost of completing abandoned work by the first contractor.

Amendments on project requirements can also cause delays because we have to modify the project specifications. For example some departments have increased their requirement from just individual septic tanks or imhoff tanks to group septic tanks or an oxidation pond. Alteration to this caused redesigning the project, added extra time as well as extra cost.” -[Ying, 29.11.1994]

Several respondents pointed out that the main problems during this construction stage are where the contractors are unable to complete the job on time.

This occurred due to financial incapability of certain contractors, internal problems (management) and difficulty of getting building materials. Three respondents pointed out:-

“The project implementation process achieving the construction stage should be fairly easy. The implementing agencies acting for the state have the capability - they have the expertise, experience and the right people to supervise the construction work. The low cost buildings are simple and not complicated. The building design is almost standardised and tender documents used are simple. The important element to ensure construction success is for the tender board to be careful in making selections and to appoint the 'right contractor'. If the tender board makes the right choice, the project could be implemented with little problem. Therefore, the assessment and advice by the implementing agency in this matter is important.” Baker-on Long Sand and Swampy Village projects.

“The construction performance is dependent on the contractor appointed for the job. In general, experienced contractors would be able to overcome construction problems easily. Problems always occurred to the inexperienced contractors and those [contractors] who depended very much on sub-contractors. Contractors abandoned projects half way, because they did not get profit from the project. This was happened because they underestimated the project cost during tender bidding. If they continue to go on they would face bigger losses. That is why they stop constructing the project.” - [KAS, 18.11.1994]

“In general there is not much difference in terms of contractors performance due the small size of the PLCHP projects, the average cost about RM1 million and the highest cost about RM5 millions. In terms of projects they were ranging between 50 to 200 units, or at the most about 300 units. It was very rare that this programme implemented projects more than 500 units of houses. Although it is small, some of the contractors faced problems of financing and expertise. Financing problems were because the contractors were too greedy. For instance they were handling too many projects on one time, or doing projects here and there [including both the public and private sector's projects]. Finally they have to victimise certain projects. Unfortunately government projects become the victim.”⁽⁴⁷⁾ [Chali, 2.11.1994]

What happened if the appointed contractor did not perform well for the project?

“Usually, the implementing agency would try first to overcome this by meeting with the contractors. Then, take stern action, if the faults were clearly contractors. Finally, as a last resort, if it can't be avoided, after complying with the proper procedures, the state would terminate the contract. However, the procedures are difficult, and the government must be careful. A new contractor will be appointed. Of course, this has to follow a certain procedure

and usually will cause additional increased cost and additional time spent on the project.” - [LAN, 17.11.1994]

Several respondents agreed that the appointment of a capable contractor is crucial during the construction stage. One of the respondents related his experience of appointing a capable contractor.

“This was especially true based on my experience during my service in the district last time. Normally at the end of the year, say during October, funds were allocated by the State Development Officer, but the time given was too short. I am not willing to give project construction to unreliable contractors who don't have a good performance record. But on the other hand relying too much on those with good records makes them the highest risks for burn out.” - [KAS, 18.11.1994]

Four elements were pointed out as the reasons for delays:-

- **The contractors;** these were faults of the contractors; when the contractors were incompetent, lacked experience, faced internal and financial problems, and other problems
- **The state;** delays in evicting squatters, making amendments to the project in terms of detailed building design or the number of houses to be built, and delays in making payments to contractors, affecting contractors' cash flow.
- **Technical departments and utilities agencies;** these agencies interrupted by imposing new standards and requirements on the projects. In coping with these, several actions had to be taken such as re-drawing some project's detailed designs, amending contract agreements, calculating new costs, fulfilling certain procedures and seeking additional loans if the funding was inadequate. Apart from cost increases, imposing new standards implied that the state would have to pay damages to contractors if work was not carried out as the consequence of actions resulting from directives from the state government or the implementing agency to the contractor.
- **External factors;** such as weather and economic factors. Weather was the usual factor blamed for the construction delays especially the heavy downpour during the monsoon season which upset the construction schedule. One respondent raised a question as to why heavy downpours were not taken into consideration when scheduling construction. Economic factors were related to the increased building

materials and labour costs and also shortage of building materials and labour supply.

SECTION FIVE: THE COMPLETION STAGE

Introduction

The completion stage is a final stage in the implementation process of the PLCHP. This stage follows the completion of the construction stage. The main concern of this stage is to expedite occupation of the completed houses. Analysis from the projects revealed that two factors delayed this completion stage: the occupant selection, and the issue of certificates of fitness.

Occupant Selection

Occupant selection is one of the sub-activities under the completion stage. The tasks related to occupant selection are carried out by the District and Land office. In general the process is as follows:-

- In some states applicants must be first registered with the State Housing Division before they are allowed to submit application to any scheme. This system of registration helps the state to be informed about demand for housing from low-income groups.
- Application forms for a scheme open for application are submitted to the District and Land Office within a specified time period.
- District and Land Offices then forward these application forms to the SHD. Processing of these application forms are computerised. During this stage certain criteria may be used to shortlist applicants.
- The selected applicants are then interviewed by the District Land Selection Committee chaired by the District Officer and an officer from the State Housing Division serves as secretary. Other members also include state councillors. After the interviews, SHD will process the applications and set the ranking based

on the point system determined by the state. Once again this processing is made through the use of computer.

- **After the points and ranking were set this committee will meet again to make decision about successful applicants. Usually there are more eligible candidates than the number of houses available. The committee will recommend a list of candidates for up to 90% of the total number of houses in the scheme. Whereas another 10% is reserved to 'Menteri Besar' (Chief Minister) of the state to give consideration to appeals by unsuccessful interviewees, other applicants or to any other persons so long as they meet the guidelines adopted by the state. Delays in processing normally occur as a result of this 10% quota.**
- **List of names (sometimes also photographs) of these successful applicants will be posted at the District and Land Office notice boards. This is to help any members of the public making complaints about the eligibility of those successful applicants.**
- **Then the Committee will meet again to check complaints and make further verification on the successful candidates.**
- **A list of recommended applicants is then submitted to the State Executive Committee for approval. The successful applicants will then be informed by letter.**
- **This selection process take place after construction has progressed between 40% to 90%. The faster the selection process completed the faster these applicants can move into the project once it finished.**
- **Successful applicant are then required to a deposit. The amount of deposit was varied, as little one month's rental or the maximum of 10% of the house price plus other charges. In 1994 it was estimated that this deposit ranged between M\$500 and M\$2,5000.**

Although comprehensive guidelines exist to assist the selection process, problems arise because too many applications are received from applicants with very similar backgrounds and needs. Usually a points system is used and the criteria for selecting house buyers include the household income, family size, the number of years domiciled in the area or district, the distance from the present house to the project, etc.

Delays occurred at this stage because of the time spent in the process of obtaining agreement from various members of the selection committee who represented political parties or ethnic groups. One respondent described the problem from his experience of handling projects in 3MP and 4MP:-

“Selection of occupants was difficult. Too many applied and short listing was difficult because variations among applicants were so few. Whoever we chose made no difference to those who were not chosen. How could the committee shortlist the applications if 500 people obtained similar points for 100 houses? This creates room for criticism. Occupant selection involved the interference of politicians. There were state councillors in the selection committee. Although, there were guidelines on occupant selection made by the state, it won't solve the problem because everyone has his own interpretation. The politicians had difficulty coming to an agreement on who to choose. Many committee meetings had to be held to make decisions on applicants. Then this list was forwarded to the state Exco for endorsement. This also sometimes was returned to the district office who were asked to revise the applicants. This selection process eventually became longer because the District Officer, who should chair the selection committee, had other jobs to do also.” - Baker for the Swampy Village and Long Sands projects.

The above description explained why some projects were left vacant although they had been completed and were ready for occupation. Delays in settling occupants into the project caused increased costs for maintenance, security patrolling services and repairs due to vandalism. In addition, the state was also losing revenue because rental collections would only begin from when the houses were occupied by occupants.

Risefield project: the occupant selection for this project, which seemed to have been carried out by a selection committee headed by the district officer, in actual fact was entirely made by the state councillor as ‘a one man show’. There was a great deal of conflict between this politician and the district office. One of the respondents, ‘Rawi’, pointed out this had caused delays because the state councillor did not put any sense of urgency into the selection. SHD had to remind the councillor many times to come up with the list of recommended applicants. The basic problem was that the district and land office and SHD were unable to put pressure on the state councillor to expedite the selection process. On the part of the councillor, he faced a dilemma selecting occupants because of pressure from party members and from the general public.

The *Stony River project* is another example of a “strong interest” by a state councillor in the list of occupants recommended by the selection committee to the state government. In September 1987 the state councillor for the constituency where the project was located wrote “...[He] strongly protested about the list of successful applicants prepared by the selection committee because he was not consulted by the committee. ..[He] requested the SHD to cancel the list, otherwise [he] threatened to protest directly to the chief minister and this would create a bigger problem.”⁽⁴⁸⁾

In some projects, a longer time was taken to complete this selection process. Too many applicants had requested to purchase houses and this made the selection process a difficult one, as shown by the *Coral Capes* project. The selection committee for this project interviewed about 1,400 applicants for the 122 houses built for the scheme. These interviews were conducted in September 1986. When the construction of this project was completed three months later, the selection committee had not completed the interviews. At last, after a lengthy time span the process was finalised in early 1988. The houses in the scheme were occupied only in May 1988.

The *Golden Hope* scheme was also faced with a large number of applicants for the 300 houses built. In contrast to *Coral Capes* project which spent an almost two years on selection, this project spent a shorter time of only 10 months. Delays still occurred, despite the intention to expedite the occupants selection, as explained in the following statement:-

“The selection of the first two-third applicants for this scheme began when the project’s construction reached about 70% completion. The objective was get occupants for the houses as soon as the project completed. Despite that delays occurred at the District Land Selection Committee’s level. This committee took a longer time in finalising their selection of candidates after all interviews for the first two thirds of the applicants completed. This was because difficult to get all the political representatives meet together. When they met also difficult to decide on the list of applicants. Then, for the remaining one-third, the selection process was stretched after the project had been completed. The District and Land Office had to wait for the decision by this committee before submitting for approval and endorsement by the State Executive Committee. The overall selection process was only finished several months after the project completed.” - [Kas, 18.11.1994]

Certificates of Fitness

Certificates of fitness for occupation are issued by the local authorities according to their planning and building bye-laws. In some states and under some five year plans, certificates of fitness were not required for the government's projects, when the end financing of house purchase was provided by the state government. Recently, local authorities have imposed planning approvals to be obtained before projects start and, as a result, a certificate of fitness must be obtained before occupation. However, in Negeri Sembilan, all government projects are still exempted from planning approval and they are not issued with certificates of fitness. This was because of the understanding reached between the state and the local authorities to shorten the process under this programme. In contrast, starting from the 4MP, several projects in Selangor were required to obtain planning approvals and certificates of fitness. In Perak, these requirements were only imposed for projects completed from the beginning of the 5MP and onwards.

Only five out of 19 completed projects needed a certificate of fitness for occupation from local authorities. Those projects were Blind Pheasant, Coral Capes, Ficuswood, Golden Hopes and Lakesland.

Blind Pheasant and *Coral Capes*: planning permission was not granted by the district councils for these two projects earlier because the authorities relaxed requirements for government projects during their planning stage. Similarly before the beginning of project construction, approval for building plans was not sought from the district council. As a consequence of the imposition of building regulations on government projects, SHD or its implementing agencies had to seek planning and building approval from the local authorities. This created friction between the SHD and the local authorities because the SHD was under pressure to expedite occupation by house buyers. In addition also, SHD felt that it should not be subject to approval by a lower level of government. On the other hand, the local authorities felt that they had the power in this matter. They also felt they were being forced to approve applications and issue certificates of fitness.

The *Ficuswood* and *Golden Hope* projects also faced difficulties in obtaining certificates of fitness despite planning applications being approved by the local authorities. The Ficuswood project failed to obtain the certificate of fitness until late 1994 even though meetings were held between various parties to solve the problem. The local authorities were reluctant to issue the certificate of fitness despite their promise at one of the meetings to issue the certificate immediately.

In contrast to the difficulties faced by the four projects highlighted above, *Lakesland Village* project did not face any difficulty in obtaining a certificate of fitness from the local authority. This happened because the project was implemented through the joint efforts of several agencies in the state, after they were directed by the Chief Minister.

General Remarks on the Completion Stage

The selection of occupants proved to be a difficult and lengthy because: (a) the number of applicants were more than the number of houses built, (b) the majority of applicants had the similar background and criteria, (c) the process of selection involved political representatives. The requirement for a certificate of fitness also created problems because of the increased role of local authorities in regulating all developments within its jurisdiction.

“Jabatan Perumahan Negara [NHD] faces difficulty with obtaining certificate of fitness for occupation from local authorities, partly because changes of conditions imposed by the local authorities. These usually take place in urban areas where the local authorities have their own technical departments and therefore are more demanding in their requirement. Additional and sometimes, rigid conditions imposed would cause undue delays in the projects and increased the cost of development.”

“When the project is completed and handed over to the state government, it will call a meeting of the technical committee which includes a site visit and if the construction has been carried out in accordance with the plans, the state will request for a clearance for occupancy. So long there is water, electricity and proper drainage the state government would allow the houses to be occupied. Sometimes, the design of houses may not conform to the local building by-laws and or other departmental’s requirement [e.g. Fire Department’s and Health Department’s requirements], but in order to reduce cost, the state government would allow the houses to built and without the need for the certificate of fitness, the problem of delays in occupancy [due to the need of c.f.] does not arise at all in this state. This state’s main concern is to reduce cost and compromise to only conform to an acceptable standards.”

One of the issues raised by a number of respondents was the competence of the personnel at local authorities, compared with the implementing agencies’ staff. The implementing agencies claimed that they had a number of engineers, architects and planners who prepared plans and supervised projects, whereas the local authorities were dependent on advice given by technical assistants in the planning section. ⁽⁴⁹⁾

SECTION SIX: IMPLICATIONS AND CONCLUSION

What has been attempted?

This chapter describes the detailed implementation process of the public low-cost housing programme at the scheme level. The projects were categorised according to their performance: the uncompleted; slow; average, and; fast projects. The implementation process was divided into four stages; formulation and planning, resourcing, construction and completion. Detailed descriptions were made of each stage by looking into all the sub-stages involved.

The process and issues involved in the planning stage seemed inter-related with each other. The pattern of site identification shows that projects' sites were usually identified after the list of projects were approved by the central agencies for each five-year plan. However, even when sites were identified, they were often subject to change. Similarly, delays occurred in site identification because states were indecisive about implementing the projects. implementation process of this of delays in one stage of the implementation process causes further delays at other stages. For example, delays in deciding the project's site cause delays in application for resourcing and eventually delays in starting the construction. Similarly delays in the completion of construction causes delays in handing over the project to SHD which finally delays occupation by house buyers.

Problems also occurred during the resourcing stage where the project must be accurately estimated, properly budgeted and timely implemented otherwise there would be inadequacy of funds to cover the total project costs. As described in this chapter, projects' allocation of funds was usually granted to states at the beginning of the five-year plan, based on the average estimated project cost per house in each of the plans. Allocation of funds for each state was made on criteria such as: the state's past trend in implementing this programme, their willingness to implement these projects, and the availability of land for the proposed projects. Hence allocations of funds were always made available to the proposed projects.

Four resourcing problems were highlighted which affect the programme's performance. First, the imposition of project cost limit determined the amount of loan approved and the maximum selling price of the low-cost housing. Violation to this

resulted to utilisation of additional funding from the state. Second, the federal government usually approved a lower amount of loan than requested. Difficulty arose as the result of the shortage of funds to cover the total project cost. Third, delays in starting project construction caused increased project cost inflation. Finally, the resourcing arrangement was “discouraging and burdening”, increasingly difficult, lengthy and involved “the hassle to collect payments from buyers.”

Construction is after the resourcing stage. Many programme administrators felt this stage was more controlled than other stages in this programme. This is because the project construction was carried out by the contractor under close supervision from the implementing agency. Monitoring of the project progress was carried out through regular meetings between the contractor, the implementing agency, the technical departments and the SHD. Problems were solved during these meetings because there were representatives from various technical departments. The main problems appointed contractors being unable to complete the job on time due to financial incapability, internal management problems or difficulty in getting building materials.

Two issues have been pointed out in relation to the completion stage: occupant selection and obtaining building’s certificates of fitness from local authorities. Delays occurred in occupant selection process because a longer time taken for obtaining consent from the selection committee. This committee consisted of various members representing political parties or ethnic groups. The selection of occupants is difficult and lengthy because: (a) the number of applicants are more than the number of houses built, (b) the majority of applicants have the similar background and criteria, (c) the process of selection involved political representatives. The requirement for the certificate of fitness imposed on some projects also caused delays of occupation. Local authorities have changed their stance in regulating development in their areas. In the past, this programme would have an expedited implementation process and cut costs by adopting a minimum standards. With this change of stance, additional time was needed to get clearance and higher cost arose because the same standards as in other housing were imposed on this programme.

Reflection and Implication

Implementation is a learning process, rather than a straight-forward process of carrying out decision, as intended. Implementation implies actions related to execution, carried out, fulfilled and brought to completion. The execution process involves not only achieving the end goal, but proceeding through a large number of detailed

processes, going through separate levels, inter-agencies, converging at times and places, and conforming with requirements and procedures. Executing a directive involves a number of people and activities before the desired result can be achieved. To a certain extent, implementation can be like a game, but without fixed rules of how the game is played, and without a fixed number players. New rules can be added and new players may chip in. In this respect, implementation is a learning process, where implementers learn to deal with these players and adjust to the rules in order to achieve policy goals

Implementation of the public low cost housing programme in Malaysia involved co-operation and concerned various level of government and agencies. This is because the bureaucratic tradition of "consulting" each other. Each agency has their own "territory" to look after which can be in the form of legislative or traditional power, holding resources, or providing services and expertise

In general it is a realistic and workable programme and its implementation can be improved through learning of what has happened to projects where some were fast and completed within a specific five-year plan, while some were slow and completed outside the intended five-year plan, and some were also not completed at all. However, the same problems repeatedly occurred in each plan. Therefore did the agencies and people involved in this programme learn from the implementation success and failure aspects of the programme?

Adequate preparation was not made to projects during the formulation stage. There were vague and generalised guidelines, list of projects were prepared in a hurry due to time constrains, it was difficult to find suitable land, poor site selection. All these contributed to poor project appraisal for each five year plan. Projects can be improved if adequate preparation made as shown by some of average and fast projects. To overcome this problem, it is suggested that the central agencies must inform states government early and they should be given ample time to prepare their project proposal.

Implementation involved a bottom-up process where by site selection, location, size of project and occupants selection was carried out at the local level. What happened at the bottom in implementing the programme, involved interactions between a range actors and agencies. To achieve harmony, everyone who has interests and jurisdiction over this matter must be properly informed or consulted. This is standard norm and practice in the Malaysian bureaucracy to guard against any sudden

unforeseen problems from other agencies. Requirements for all parties involved must be made clear at the beginning, and all parties must be held to honour their commitments. When a programme involves two levels of government and various 'actors', the basic implementation problem is the problem of co-ordination and the assembly of resources from the two levels of government and agencies operating in this programme. In this programme, there are three key players; the Ministry, the states and implementing agencies. In addition the programme's scope extends to other central agencies such as the EPU, ICU and Treasury. At the state level agencies like the District and Land Office, the Town and Country Planning Department, Health Department, Public Works Department, Fire Department and the Water Supply Department are involved and at the independent level other agencies, e.g. electricity supply and the local authorities are involved. Finally politicians, for good or bad, may exert their influence on various stages of the project. There are many constraints despite the objective of the programme *"to build quantities of cheap houses within the five year plan."*

Squatters eviction must not be viewed from the perspective of land law only. Evidence from a few cases proved that their resistance can cause project delays or even cancellation. However, if they were promised to legal houses, they co-operated and produced very little resistance.

Another emerging question arose of why agencies and actors at the bottom were able to co-operate when the "top politician in state is behind the project"? Similarly why councillors and politicians at local level produced negligible interference with some projects? Does this mean programme implementation need strong leadership?

There was attempt to shorten implementation time by giving directives to government agencies to expedite the process in every step. For example, the land acquisition process must be settled within six month. However, there was no attempt to shortcut the procedures by shortening the steps.

¹ A researcher must be careful and cautious on making conclusion. He should give a pause for some thought to avoid pitfalls and errors in making conclusion. Miles and Huberman suggested 12 tactics for testing or confirming findings; (1) Representativeness; that the researcher must check representativeness of samples selected for the study to avoid mistakes in appropriate generalisation. Pitfalls of sampling. A researcher may run risks of falling into generalising pitfall by sampling from non-representative events or activities; generalising from non-representative events or activities; and drawing inferences from non-representative process. (2) Checking the researcher's effect; to check bias against; what is the researcher

- effect to site and what is the site effect to the researcher. (3) Triangulation; across data sources and methods to support a finding by showing that independent measures of it agree with it or, at least, do not contradict it. (4) Weighting the evidence- deciding what kind of data are most trustable. (5) Contrast and comparisons; looking for the difference. (6) Checking the meaning of outliers; is a good approach to test the strength of basic findings and to protect against self selecting biases. (7) Using the extreme cases; similarly like the outliers, this is as another way of weighting evidences. (8) Ruling out spurious relations; avoid hurrying into the conclusion if two variables seemed associated, pause a while to consider a third variable might be present and causing the two variables. (10) Replicate a finding; to repeat the fieldwork by collecting new information's from new informants, new settings and new events. (10) Check out rival explanations; check for the "next best" explanation as the one you preferred at the end of a fieldwork. (11) Looking for negative evidence; to find out is there any data opposed or inconsistency with the conclusion. (12) Feedback from informants: is to learn more about the site, not only about the feedback.
- ². Estimate Sub-Committee formed under the National Development Planning Committee (NDPC). NDPC is the highest decision making body at the official level in the Malaysian development planning system. It deals with the formulation and detailed consideration of development plans, programme and projects. The committee is chaired by the Chief Secretary General of the government and consisted of twelve members representing key federal agencies like the Implementation and Co-ordination Unit (ICU), the Public Service Department (PSD), the Ministry of Primary Industries, Trade and Industry, Education, the Federal Treasury, the Science's adviser to Prime Minister's Department, the Public Works Department, National Bank, Ministry of Agriculture and the Economic Planning Unit who serves as the secretariat for the committee. The Estimate Sub-Committee is responsible for the annual and five years financial and budgetary allocation.
 - ³. Off-site infrastructure according to the SHD's letter of instruction means the availability of electricity and water supply, feeder road and drainage adjacent to the proposed site.
 - ⁴ He was involved in the formulation and implementation of six projects in Selangor as follows: (1) Black River 3, (2) Three Mile Stone, (3) Ficuswood Settlement, (4) Lumber Junction, (5) Lakesland Village, and (6) Coralville.
 - ⁵. Until December 1994.
 - ⁶ Confirmed by investigation to the minutes of said meeting.
 - ⁷. The types of land that were used for the public housing as revealed by the quantitative data collection, also involved 'institutional land' in addition to the two categories as stated out above. Institutional land means land which owned by the public corporations.
 - ⁸ Interview with Kas; a programme administrator at the state level in charge implementation and co-ordination of projects in the state in 5MP and 6MP.
 - ⁹. Interview with one of the programme administrators at the Ministry level.
 - ¹⁰. Interview with 'RAS' one of the programme administrators at the Ministry level.
 - ¹¹. Refer to discussion on project resourcing to this programme in Chapter 4. Refer Table 4.2 for the amount of annual budget allocation to the MHLG for housing programme from 1976 to 1990.
 - ¹². Interview with one of the officers in-charge of the project at the Ministry of Housing and Local Government. He was involved in the programme formulation before the launching of the Fifth Malaysia Plan (1986-1990) and the Sixth Malaysia Plan (1991-1995) and is now involved in the preparation of the Seventh Malaysia Plan (1996-2000)
 - ¹³ Annual budget allocation for the Low Cost Housing Programme under the Ministry of Housing and Local Government discussed in the Chapter 4 related to the Background and Development of Public Low Cost Housing Programme in Malaysia (refer Table 4.2, page 131).

- ¹⁴ Detailed information shown by the programme administrator and extracted from the project file. This amount was requested by the District Office in a letter dated 5.1.82, payable to 18 occupiers of the proposed site of the project. The state Treasurer utilised the state's own funding for the payment of the said amount on 18.3.82
- ¹⁵ All figures were verified through project's records at the request of a respondent who involved in the interviews.
- ¹⁶ Maximum selling price for low cost houses is not exceeding M\$25,000.
- ¹⁷ As the result of payment for the compensation because an alienated land was acquired for the project. The compensation made by the government for this land was originally only M\$141,725 in 1982. When the land owner contested the amount of compensation, the court directed the state to pay an additional compensation of M\$160,000.
- ¹⁸ Figures and dates presented here were verified through the project record.
- ¹⁹ Interview with 'Haze' a programme administrator at the state level who was in-charged of the two project during 4MP.
- ²⁰ As explained by 'Halo' where the state was in a favourable financial situation. The state received a large amount of compensation from the federal government for taking a portion of its area as a federal territory.
- ²¹ The National Planning and Development Committee.
- ²² Interviews with Ras, Zaky, Chali, Kas, Rawi and Sheik.
- ²³ Interview with Ying.
- ²⁴ Interview with Kani
- ²⁵ Interview with Chali
- ²⁶ Interview with Ras, Zaky, Ross and Hami.
- ²⁷ Chali: is currently is serving as programme administrator at the state level since 1991. Before 1991 he was also involved with few projects when he served the District and Land Office 1979-1991. KAS, KAN, YING, HARRY and LAN agreed with the point of view. 'KAS' is currently is serving as programme administrator at the state level from 1992. He was also served the same post, as programme administrator during 4MP. Then was transferred as head of the District and Land Office from 1985 to 1992. He was also involved with PLCHP in his district. KAN is chief co-ordinator at the implementing agency. She was involved with PLCHP's projects since 1974. YING is a project engineer at the implementing agency and was involved in similar projects throughout his career. HARRY was involved in this programme in 1980 to 1983 in one of the states. Then he was transferred to one of the utility agencies. From 1993 he is again return to this programme but in another state. LAN, one of building quantity surveyor who estimates project costing at the implementing agency.
- ²⁸ This narration was presented to this interviewer with the help of reading the project's record for an accurate account of figures highlighted.
- ²⁹ Notes; to add later the description of the seven reasons put forward by the SHD to the State Financial Officer, recommended that this project to be cancelled. Among the reason because the SHD was 'frustrated' with the long delay in project implementation, the project conflicted with the state own privatised projects, the state preferred the end financing for this project obtained from financial institution.
- ³⁰ Interview with Aziz-2.
- ³¹ The respondent used his own terminology as 'suspect' rather than words like 'guess', 'assume', 'believe' etc.
- ³² Note: Actual figures read by respondent from project's file. The figures presented have been rounded.
- ³³ The intonation by respondent indicated that he is so confident with this sort of arrangement for projects implemented by the SEDC.
- ³⁴ Excerpt from interview notes with Kas.

³⁵ Interview with 'Rawi'.

³⁶ Interview with 'Kas'.

³⁷ Interview with 'Kas'.

³⁸ Interview with 'Baker'.

³⁹ These documents are based on the offer of tender for the Gingling project.

⁴⁰ Interview with 'Rawi'.

⁴¹ Interview with 'Kani'.

⁴² Dates verified from the project record.

⁴³ Another respondent raised his doubt when 'weather' as said the main excuse for project delays. Knowing the local weather, a problem such as heavy downpour should be anticipated and taken into considerations when scheduling project's construction. He suggested the implementing agencies to check the contractor's record of works and compare with weather report which can be obtained from Meteorological Department.

⁴⁴ Note: Two conflicting figures were obtained from two respondents. The figures of M\$295,000 obtained from a respondent at the implementing agency whose involved in the project. His figures was verified from his department's record. To the contrary investigation from the administrative record (the loan additional application paper) was said as M\$494,492 were paid to the first contractor when the project terminated.

⁴⁵ Verified through project records.

⁴⁶ These contractors had constructed a number of projects for this programme since 2MP (1971-1975) under the supervision of the Housing Trust. The National Housing Department took over the roles of Housing Trust when the Trust was abolished in 1975. All personnel of Housing Trust was absorbed into the new establishment. Similarly, the list of registered contractor used the registration prepared by the previous Housing Trust.

⁴⁷ Sheriff also expressed that government is a bad paymaster.

⁴⁸ Could this be an example of a lack of understanding of the guidelines or did he purposely protest to show disagreement with the decision achieved by the committee?

⁴⁹ From interviews with several respondents: Ying, Ri, KAN, Lan and Sheik.

Chapter Ten:

Testing the Hypotheses

INTRODUCTION

The previous two chapters, reported the analysis of the quantitative and qualitative data focusing on the four stages of the implementation process, the length of time taken, programme funding and costs, and programme targets. In Chapter 6 three research hypotheses were developed about project planning, funding and resourcing and the interactions between actors and agencies involved in the programme. This chapter tests these hypotheses.

Chapter 8 provided an overview from the quantitative survey of the pattern that occurred in three five-year plans in seven states and the three types of implementing agencies. Analysis of the average time taken to complete projects shows that the mean of time taken was longer than the five year plan period itself. As a result a large number of projects had to be carried over to the next plan. Comparison between plans confirmed there were no significant differences. This implies that there were few changes in the implementation process and that little learning occurred in improving the programme performance in terms of shortening the time taken. By contrast, comparison between implementing agencies shows significant differences in the time taken for the implementation process. Similarly significant difference existed between states in the length of time taken.

Chapter 9 has provided a detailed account of the implementation process through qualitative analysis. The key findings showed that there were problem of delays in completing the projects. These delays were mainly associated with problems during the formulation and planning stage. As a result, the total project cost in a number of schemes escalated because increased construction costs. However the government was slow in changing the funding arrangements. Slow moving projects were carried over to the next plan, and eventually cost more, as the result of these delays. Also by the end of the five-year plans, the number of houses built were less than the intended target.

Outline of the Chapter

This chapter is divided into four parts: three parts on hypotheses testing and one part on summary and conclusion. The first part deals with the hypothesis on project preparation and planning stage. The second part is about programme funding and resourcing. The third tests on the interaction between various actors, agencies and levels of government at the bottom in the programme implementation process. This chapter aims to test hypotheses formulated in Chapter 6.

Both sets of data (quantitative and qualitative) are used in the testing of these hypotheses. The quantitative data used statistical techniques for the analysis such as chi-square tests, t-tests, analysis of variance (ANOVA), correlation coefficient and multiple regression analysis. Analysis of the qualitative data used several qualitative tactics in generating meaning from the data display such as counting, noting pattern and themes, seeing plausibility, clustering and noting relationship between variables. Thus triangulation was used in hypotheses testing.

SECTION ONE: PROJECT PREPARATION AND PLANNING: HYPOTHESIS ONE

The Hypothesis

This section sets out to test the first research hypothesis on the significance of preparation and planning of project on the subsequent implementation process and the overall programme performance. This hypothesis predicts that the shortfall of programme is partly because of inadequate preparation at the formulation and planning stage, the length of time taken in the implementation process and was itself affected by the planning period, states and implementing agencies. Four statements are developed to assist testing the hypothesis as follows:-

Statement 1a: "That a large proportion of public low-cost housing projects had a completion time of more than five years."

Statement 1b: "That projects where some preparations were made before the formulation stage had shorter completion times than projects where preparations are made during the formulation stage."

Statement 1c: “That the earlier implementation stage is significantly related to the subsequent stages. When a longer time is taken to complete the planning stage, then a longer time is needed to complete the whole project implementation process.”

Statement 1d: “That the length of time spent on the whole implementation process varies significantly between five-year plans, states and implementing agencies.”

There are four major stages involved in the implementation of public low-cost housing projects. Sequence and the average time taken for these implementation stages can be seen in Diagram 10.1. A list of summary for variables discussed in the hypotheses testing is found in the appendix to this chapter.

PROJECT COMPLETION MORE THAN FIVE YEARS

In each of the five-year plans the programme failed to achieve the intended target. A large proportion of these projects were completed over five years: 73% (121 out of 166 projects) completed in more than five years, compared with only 27% (45 projects) completed in less than five years.

The chi-square test produces only a small chi-square value of .213 where no significant association exist between the five-year plan period and the project completion time at an alpha of .05 is established. This chi-square test confirms that in the population as a whole there was no association between any of the five-year plan periods and the length of time of project completion, whether less or more than five years.

In summary, a large proportion of projects were completed in more than five years, however, there is unlikely to be any relationship between this length of time, whether less or more than five years and any of the five-year plan periods. This analysis confirms that the average length of time taken to complete the projects' implementation process would be longer than the five-year plan's time period.

Diagram 10.1: Length of Time for the Implementation Process of the Public Low Cost Housing in Malaysia (mean in months)

Year	Year 2			Year 3			Year 4			Year 5			Year 6			7																	
Months	2	2	2	3	3	3	3	3	3	4	4	4	4	4	4	5	5	5	5	5	6	6	6	6	6	7	7	7	7	8	8	8	8
	4	6	8	0	2	4	6	8	0	2	4	6	8	0	2	4	6	8	0	2	4	6	8	0	2	4	6	0	2	4			
Planning Stage																																	
Formulation to application (FORMAPLY)																																	
Application to TCOHL decision (APLYTCHL)																																	
Length of Planning stage (PLANSTAG)																																	
Resourcing stage																																	
TCOHL to Treasury approval (TCHLTSRY)																																	
Treasury to agreement signed (TRSYAGRE)																																	
Agreement to first withdrawal (AGREIOUT)																																	
Length of Resourcing Stage (RESOCING)																																	
Construction stage (CONSTRUC)																																	
Completion stage																																	
Construction ends to completion (ENDCOMP)																																	
Completion to occupation (COMOCC)																																	
Length of completion stage (COMSTAGE)																																	
Overall process																																	
Formulation to begin construction (FORMBEGN)																																	
Formulation to completion (SPAN)																																	
Formulation to occupation (FORMOCC)																																	
	Year 2			Year 3			Year 4			Year 5			Year 6			7																	
	2	2	2	3	3	3	3	3	3	4	4	4	4	4	4	5	5	5	5	5	6	6	6	6	6	7	7	7	7	8	8	8	8
	4	6	8	0	2	4	6	8	0	2	4	6	8	0	2	4	6	8	0	2	4	6	8	0	2	4	6	0	2	4			

Notes: Assume that formulation stage begin six month before the beginning of five-year plans

Target

Target shortfall occurred at the end of each plan because a large proportion of projects were not completed within the intended plan. There are several reasons for this:-

- First, there was a shortfall in the number of houses built. In some projects, lower targets were reconsidered after taking into account the size of - available site, planning requirements and the suitable lay-out plan for the schemes. Data analyses on the 166 completed projects shows that 57% of projects built the number of houses as targeted, 30% built lower than the number targeted, and 14% built more than the target.
- Second, the number of houses at approved during loan approval by TCOHL were lower than the original target in some of the schemes. A number of projects proposed by states had lower targets to accommodate the smaller allocation of funds provided. Similarly, TCOHL also cut down the size of a number of projects in order to accommodate them within available funding.
- Third, target shortfall also occurred because a number of houses were carried over to other five-year plans and a number of projects were never completed. The number of houses completed within the same plan was smaller than those completed in the next plan. Data analysis from 215 projects showed that out of a total 42,316 houses targeted: only 6,950 houses were completed within the same plan (16%); 15,529 houses completed in the next plan (37%); 6,722 houses completed during next two plans (16%); and 13,135 houses were not built at all (31%). Another data analysis from the 166 completed projects showed that there was a short fall of 3,785 houses out of 33,343 originally targeted. This occurred because the number of houses built in some of the projects was smaller than their original target.

PROJECT PREPARATION AND PERFORMANCE

Statement 1b set out to test the relationships between project preparation and project performance. The aim is to find out whether preparations made before the projects' formulation and planning stage had any effect on the length of time taken to complete the project. It is predicted that projects where some preparation was made

before the formulation stage had a shorter completion time than projects where preparations were made during the formulation and planning stage.

The relationships between components of project preparation and programme performance have been discussed in detail in Chapter 8 covering the variables listed below:-

- **IDENTIFY**: when site identification was made
- **EXTEND**: whether the project is an extension from the previous phase of development
- **SITECHG**: whether a change of site occurred
- **LANDREPT**: when the land report was made
- **FEASIBLE**: the type of feasibility studies made for the project
- **SURVEY**: when the land survey was made for the project.

The analysis in Chapter 8 examined the differences which occurred between these variables in several programme implementation stages. One-way ANOVA tests have been carried out between the variable IDENTIFY and six implementation stage variables (FORMAPLY, PLANSTAG, RESOCING, CONSTRUC, FORMBEGN, and SPAN) which produced statistically significant results at an alpha of .05 but with small F values. This could be interpreted as being due to the sampling fluctuations. The test on the variable FORMOCC produced result of no significant difference at an alpha of .05 but with a small F value. (Refer to table 8.29 in Chapter 8.) The t-test on variable EXTENT produced no significant difference over the length of time for project completion. Two more preparation variables LANDREPT and SURVEY have been tested on the project completion time by t-tests and they produced statistically significant differences results but small F-values. Also analyses have been made on variables AMEND and SITECHG and they found that significant differences occurred to several implementation stages. (Refer Table 8.32 and 8.34 in Chapter 8.)

The testing of project preparation hypothesis engaged cross-tabulations and chi-square tests on a series of independent variables IDENTIFY, EXTENT, LANDREPT and SURVEY with a series of dependent variables FOROC5YR, STATUSIN and FOROCQTL. Variable FOROC5YR is the project completion time which categorised whether it was below five years or more than five years. Variable STATUSIN is the variable on the project completion time; whether the project was completed within the same plan or outside the intended plan. However, FOROCQTL is the time taken for project completion which is divided into the four quartiles. (Refer

also table 8.19 in Chapter 8). The time of project completion according to quartiles is as follows:-

Below First Quartile: projects completed in less than 59 months

First Quartile: projects completed between 59 to 79.8 months

Second Quartile: projects completed between 79.8 to 103 months

Third Quartile: projects completed more than 103 months.

Table 10.1 shows the results of statistical tests between four preparation variables (EXTENT, IDENTIFY, LANDREPT and SURVEY) and whether project completion time was below or more than five years. On the variable EXTENT, the researcher had assumed that the extension projects from previous phase of development have experienced some degree of preparation. On the other hand, the non-extension projects do not have this advantage. For variables IDENTIFY, LANDREPT and SURVEY, they are divided into whether preparation is made before or during the formulation and planning stage.

The results of chi-square in Table 10.1 show that there existed relationships between variables IDENTIFY and SURVEY, and the dependent variable FOROC5YR at the significant level of .05. However there is no relationship between FOROC5YR to EXTENT. Variable LANDREPT provided a value of 0.053 that can be accepted as significant at an alpha .06.

Table 10.1:

RELATIONSHIPS BETWEEN PROJECT PREPARATION AND COMPLETION TIME OF LESS OR MORE THAN 5 YEARS (FOROC5YR)

Variables	D.F.	Chi-square Value	Significant Level	Phi
EXTENT	1	.084	.7715	.0225
IDENTIFY	1	7.14	.0076	.2073
LANDREPT	1	3.73	.0533	.1500
SURVEY	1	9.41	.0021	.2381

Source: Researcher's First Stage/Quantitative Data Collection

Table 10.2 below shows results of statistical tests between four preparation variables and project completion status of whether completed within or outside the intended plan (STATUSIN). The results of chi-square provide that relationships exist between variables IDENTIFY, LANDREPT and SURVEY to the dependent variable STATUSIN but there is no association with the variable EXTENT.

Table 10.2:

RELATIONSHIPS BETWEEN PROJECT PREPARATION AND COMPLETION
WITHIN OR OUTSIDE INTENDED PLAN (STATUSIN)

Variables	D.F.	Chi-square Value	Significant Level	Phi
EXTENT	1	.000	.9851	-.0015
IDENTIFY	1	9.74	.0018	.2422
LANDREPT	1	4.35	.0369	.1619
SURVEY	1	6.93	.0085	.2044

Source: Researcher's First Stage/Quantitative Data Collection

Table 10.3 below exhibits the results of chi-square tests of preparation variables with the time spent for project completion which is categorised by its quartiles. Chi-square results in Table 10.3 below provides statistical significant values for variables IDENTIFY and SURVEY. This explains that there are significant relationships between IDENTIFY and SURVEY variables, and the projects' length of completion time categorised by its quartiles. This implied that the relationships exist between site identification and survey being done before the formulation and the planning stage, and project completion. The other two preparation variables, EXTENT and LANDREPT fail to yield relationships with the dependent variable.

Table 10.3:

RELATIONSHIPS BETWEEN PROJECT PREPARATION AND COMPLETION
TIME BY QUARTILES

Variables	D.F.	Chi-square Value	Significant Level	Phi
EXTENT	3	.173	.9818	.0324
IDENTIFY	3	8.29	.0404	.2242
LANDREPT	3	5.22	.1567	.1771
SURVEY	3	10.1	.0179	.2471

Source: Researcher's First Stage/Quantitative Data Collection

Decision on project preparation

On testing this statement, four preparation variables are tested against three performance variables by chi-square tests. The variable EXTENT consistently shows no significant association with the three performance variables. This implies that there is no advantage to a proposed project whether it is an extension from the previous

phase or a new site. The variable LANDREPT shows a relationship with performance variables of FOROC5YR and STATUSIN but fails to provide a relationship with variables FOROCQTL. The other two preparation variables IDENTIFY and SURVEY consistently produced statistically significant values for the performance variables. Since all the preparation variables do not produce the same results therefore this statement is considered as “partially support” because not all the project preparation before the formulation stage variables have a statistically significant association with shorter completion times.

PLANNING STAGE AND IMPLEMENTATION PROCESS

The quantitative data analyses in Chapter 8 confirmed that the time taken for the planning stage was the longest of the four implementation stages. The mean and median value of 32.1 and 32.9 months respectively implied that in general the planning stage was completed during the beginning of the third year of the five-year plan. Also, the average time taken for this stage was almost half of the total time spent for the implementation process. Comparisons of the mean and median times taken for the planning stage between the three five-year plans, showed variations occurred between plans (see Table 8.18 and Table 8.19 in Chapter 8). However, the statistical test by one-way ANOVA implied that these were not statistically significant.

In relation to the whole implementation process, it was predicted that the planning stage was significantly related to the subsequent stages; and that when a longer time was taken to complete the planning stage, then a longer time was needed to complete the whole project implementation process. Correlation and multiple regression analyses are used to test this statement.

Correlation analysis measures the strength and direction of the relationship between two variables (Bryman and Cramer, 1992; p.162-163). The test produces Pearson's r value between -1 and +1 which indicates a perfect relationship, whether negatively or positively between two variables. Similarly, the test would indicate a strong or a weak relationship between variables in question by the Pearson's r value produced. As a guideline, Cohen and Holliday (1982) propose that the value can be interpreted as: between 0.0 and 0.19 is very low association; 0.20 to 0.39 is low association; 0.40 to 0.69 is modest association; 0.70 to 0.89 is high association, and; between 0.90 to 1 is very high association (from Bryman & Cramer, 1992; p.168).⁽¹⁾ However, as Bryman and Cramer (1992; p.168) clarify further, these values rules of thumb only because there is hardly any substantial consensus on the guidelines.

Two planning stage variables, FORMAPLY and PLANSTAG were correlated against six other implementation variables of subsequent stages as can be seen in Table 10.4. The results show that the FORMAPLY variable has a substantial association with FORMBEGN, SPAN and FORMOCC. In contrast, the FORMAPLY variable shows negligible association with the resourcing and construction stages (RESOCING and CONSTRUC variables). This FORMAPLY variable shows a strong association with the PLANSTAG variable which produces a correlation value of 0.86. This is because the completion of the planning stage is closely related to when the loan application is submitted to the TCOHL at the Ministry of Housing and Local Government. The FORMAPLY variable shows modest association with FORMOCC of .52. The PLANSTAG variable shows a strong association with FORMBEGN variable with a correlation value of 0.72. This implies that the time when projects reached the stage of starting construction work had a strong association with the planning stage. The same PLANSTAG variable produced a substantial association with SPAN and FORMOCC variables. This implies that there is a substantial association between the planning stage and the subsequent project implementation stage of completing the project construction (SPAN) and achieving the house occupation stage (FORMOCC). However the PLANSTAG variable produced a negligible association with the resourcing and construction stage (RESOCING and CONSTRUC respectively). The same Table 10.4 also provides correlation between six other variables. A strong association can be seen between variables as follows: FORMBEGN and SPAN (0.86); SPAN and FORMOCC (0.99), and; TCHLBEGN and FORMBEGN (0.71). Substantial associations produced between variables are as follows: TCHLBEGN and SPAN (0.65), and; TCHLBEGN and FORMOCC (0.64). Two variables, RESOCING and CONSTRUC show low and negligible association with other variables.

Table 10.4:

CORRELATION BETWEEN SEVERAL IMPLEMENTATION PROCESS VARIABLES

Variables	1	2	3	4	5	6	7	8
1. FORMAPLY From project formulation to loan application	1.0							
2. PLANSTAG The planning stage	.86	1.0						
3. RESOCING The resourcing stage	-.01	-.02	1.0					
4. FORMBEGN From formulation to starting of construction	.63	.72	.3	1.0				
5. TCHLBEGN From TCOHL's approval to the starting of construction	.08	.07	.47	.71	1.0			
6. CONSTRUC Duration of construction	-.1	-.03	.02	.04	.11	1.0		
7. SPAN From project formulation to the completion stage	.53	.63	.28	.86	.65	.45	1.0	
8. FORMOCC From project formulation to the occupation of houses	.52	.61	.27	.84	.64	.48	.99	1.0
Mean	32.1	37.7	15.6	53.4	15.6	21	79.3	83.9
Standard deviation	18.9	20.1	11.6	29.2	11.6	12.6	33	32.8

Note: Correlation of .05 or greater are significant when two-tailed are used.

Source: Researcher's First Stage/Quantitative Data Collection

A simple bivariate regression analysis was carried out between PLANSTAG and FORMOCC. This aimed to test the degree of association and linearity between the planning stage (PLANSTAG) and the total length of time taken to complete the project (FORMOCC). The following Table 10.5 provides a selected summary of statistics obtained from SPSS linear regression.⁽²⁾

Table 10.5:

**RELATIONSHIPS BETWEEN THE PLANNING STAGE (PLANSTAG) AND
PERFORMANCE BY LENGTH OF TIME (FORMOCC)**

Dependent Variable: Total Project Completion Time (FORMOCC)

Multiple R	.63290	Analysis of Variance	D.F.	Sum Square	F-Value
R Square	.40056				
Adjusted R Square	.39688	Regression	1	69045.3	108.9
Standard Error	25.17768	Residual	163	103328.2	Significant of F .0000
Variable	B	Beta	Standard Error	T	Significant of T
Planning Stage	1.020038	.632895	.097738	10.436	.0000
Constant	44.872917		4.184177	10.724	.0000

Note:

Data analysis based on 165 completed cases where case no.6 (the outlier) was excluded from this analysis. The multiple-R value has increased slightly to .63 in this table as compared to .61 in the previous Table 10.4.

Source: Researcher's First Stage/Quantitative Data Collection

The multiple R value of .63 from the Table 10.5 above indicates that there is a substantial positive association between an independent and a dependent variable where the value of the R square indicates that 40% of the variation in total projects' completion time (FORMOCC) is explained by linear regression on the planning stage variable. The table above also indicates that constant is equal to 44.9 and unstandardised B is equal to +1.02. In other word this tells that the predicted score on total projects' completion time (FORMOCC) is 44.9 months when the planning stage is 0. To obtain a predicted total projects' completion time (FORMOCC) = Y' for any given length of planning stage (X), the linear equation is as follows:-

$$Y' = 44.9 + 1.02X$$

Therefore if a project planning stage is completed within 18 months as assumed during the programme formulation, then the predicted time taken for the whole implementation process would be:-

$$Y' = 44.9 + 1.02 (18) = 63.3$$

This regression implied that the formulation and planning stage must be about 20 months if the project to be completed within the same plan. Therefore if the project is to be completed within the intended five-year plan (66 months after taking into consideration the fact that the formulation began 6 months earlier) then the planning stage (x) would be completed as follows:-

$$66 = 44.9 + 1.02 (x)$$

Therefore $x = 20.7$ months

Another regression analysis was carried out between FORMAPLY variable (the time taken from project formulation to loan application) and FORMOCC as shown in Table 10.6. This analysis produced the multiple R value of .53 which implies a modest association between an independent and a dependent variable.⁽³⁾ The value of the R square indicates that only 28% of the variation in total projects' completion time (FORMOCC) is explained by linear regression on the FORMAPLY variable. This FORMOCC's multiple R value of .53 is lesser than the earlier PLANSTAG value of .63 implies that other factors at were work between the FORMAPLY and the completion of planning stage. The other reason is when the stage is closer to the completion stage then the higher would be the value of the multiple R.

Table 10.6:

RELATIONSHIPS BETWEEN THE PART OF PLANNING STAGE (FORMAPLY)
AND PERFORMANCE BY LENGTH OF TIME (FORMOCC)

Dependent Variable: Total Project Completion Time (FORMOCC)

Multiple R	.52867	Analysis of Variance	D.F.	S.S.	F-Value
R Square	.27950	Regression	1	47532.3	63.23069
Adjusted R Square	.27508				
Standard Error	27.41766	Residual	163	122531.6	Significant of F .0000
Variable	B	Beta	Standard Error	T	Significant of T
FORMAPLY	.898638	.528674	.113011	7.952	.0000
Constant	54.511057		4.209086	12.951	.0000

Note:

Data analysis based on 165 completed projects where case no.6 (the outliers) was excluded from the analysis.

Source: Researcher's First Stage/Quantitative Data Collection

It is predicted also that total project's completion time (FORMOCC) has relationship with all the four implementation stage variables; the PLANSTAG, RESOCING, CONSTRUC and COMSTAGE. Data analysis was carried out aimed to determine the degree of linear dependence of FORMOCC on the four independent variables operating jointly. The multiple regression analysis was employed to test this hunch and the results are shown in the Table 10.7. This analysis produced a strong correlation of .87 and the R-square's value of 0.75 which can be interpreted that 75% of the variation in the total projects' completion time (FORMOCC) is explained by the four implementation stages (PLANSTAG, RESOCING, CONSTRUC and COMSTAGE).

Table 10.7: MULTIPLE REGRESSION ANALYSIS OF PLANNING STAGE AND OTHER STAGES OF IMPLEMENTATION PROCESS

Descriptive Statistics

Variables	Mean	Std.Deviation	Label
FORMOCC	83.5	33.1	Length of time: the whole process, from formulation to occupation of houses.
PLANSTAG	37.6	20.3	Length of time: the planning stage from formulation to TCOHL approval.
RESOCING	15.6	11.6	Length of time: Resourcing stage, from TCOHL approval to 1st. withdrawal.
CONSTRUC	20.9	12.8	Length of time: the construction stage.
COMSTAGE	10.8	9.3	Length of time: the completion stage.

Correlation, 1-tailed Significant:

	FORMOCC	PLANSTAG	RESOCING	CONSTRUC	COMSTAGE		
FORMOCC	1.000	.617	.273	.475	.221		
		.000	.000	.000	.002		
PLANSTAG	.617	1.000	-.016	-.041	-.107		
	.000		.420	.303	.088		
RESOCING	.273	-.016	1.000	.026	-.042		
	.000	.420		.373	.298		
CONSTRUC	.475	-.041	.026	1.000	.178		
	.000	.303	.373		.012		
COMSTAGE	.221	-.107	-.042	.178	1.000		
	.002	.088	.298	.012			
Multiple R	.86718	Analysis of Variance	D.F.	Sum Square	F-Value		
R Square	.75201						
Adjusted R Square	.74565	Regression	4	131601.48	118.26		
Standard Error	16.6792	Residual	156	43398.42			
Variable	B	Beta	Standard Error	F			
Planning Stage	.998331	.613224		9.942			
Constant	46.195111						
Variable	B	SE B	95% Confidence Interval	Interval B	Beta	T-Value	Sig. Of T
PLANSTAG	1.083146	.065476	.953812	1.212479	.6637	16.543	.0000
RESOCING	.800353	.113495	.576169	1.024538	.2816	7.052	.0000
CONSTRUC	1.180764	.105159	.973044	1.388484	.4552	11.23	.0000
COMSTAGE	.798073	.145522	.510626	1.085520	.2236	5.48	.0000
(Constant)	-3.006778	4.267245	-11.43581	5.422258		-.705	.4821

Total Cases = 166

Durbin-Watson Test = 1.8

Source: Researcher's First Stage/Quantitative Data Collection

Multiple regression can be used to determine the statistical significance and strength of association for the overall regression and individual independent variables (Poister, 1978; p.539). A multiple linear regression model postulates the dependent variable as a linear combination of a number of independent variables. It predicts the association and simultaneous effects of two or more independent variables on a dependent variable, such that:

$$Y = B_0 + B_1X_1 + B_2X_2 + \dots + B_kX_k + e$$

Therefore, the multiple regression from Table 10.7 is as follows:-

$$Y = -3.006778 + 1.083146 (\text{PLANSTAG score}) + .800353 (\text{RESOCING score}) + 1.180764 (\text{CONSTRUCT score}) + .798073 (\text{COMSTAGE score})$$

Suppose that we want to complete the project within the same intended plan at the maximum 66 months time span, the predicted combination of the length of time taken for the four implementation stages would be as follows:-

$$66 \text{ months} = -3.006778 + 1.083146 (24.5 \text{ months}) + .800353 (13 \text{ months}) + 1.180764 (20 \text{ months}) + .798073 (12 \text{ months})$$

The multiple regression estimate from Table 10.7 suggests that all the variables are statistically significance where each produces a significant t-value of less than alpha 0.05. Variable PLANSTAG appears to be the best predictors because it has the largest t-value of 16.543 amongst the dependent variables.

In Table 10.8 is another model of multiple regression analysis, testing the relationships between the planning stage (PLANSTAG) and dummy variables for three agencies and seven states with the time of project completion. The test result revealed a moderate association between independent variables and dependent variable with a multiple-R of .65, R-square of .42 and F-value of 12.8 which was significant at an alpha .05. Variable PLANSTAG produced t-value of 8.9 and significant t-value of .0000. Whereas, dummy variables for states and agencies did not produce significant t-value. This implies that the planning stage is very significant to the project completion time.

Table 10.8:

**RELATIONSHIPS BETWEEN THE LENGTH OF TIME (FORMOCC) WITH
PLANNING STAGE, AGENCIES AND STATES.**

Dependent Variable: Total Project Completion Time (FORMOCC)

Multiple R	.65122	Analysis of Variance	D.F.	S.S.	F-Value
R Square	.42408	Regression	9	74925.85	12.76
Adjusted R Square	.39086				
Standard Error	25.53927	Residual	156	101751.68	Significant of F .0000
Variables	B	Beta	Standard Error	T	Significant of T
PLANSTAG	.942381	.578856	.105038	8.972	.0000
NHD	7.147231	.101613	6.107047	1.170	.2437
PWD	-5.557616	-.067200	7.699509	-.722	.4715
JOHOR	8.495401	.082904	8.128671	1.045	.2976
NSMBILAN	-1.114211	-.011580	7.219925	-.154	.8776
PERAK	1.703009	.018972	7.468088	.228	.8199
PENANG	-4.685593	-.042386	9.160442	-.512	.6097
PAHANG	6.793004	.073226	7.093338	.958	.3397
TRENGANU	.0015525	1.042E-04	1.076675	.001	.9989
Constant	45.514708		6.404284	7.107	.0000

Note: Variables not in the Equation:

SEDC and SELANGOR because reached limits of minimum tolerance.

Source: Researcher's First Stage/Quantitative Data Collection.

The following Table 10.9 is another model of multiple regression analysis that testing the relationship between the planning stage (PLANSTAG) and the time taken to complete the project implementation with four other variables. The four other variables are:

- (a) TARGET is a variable on the number of houses intended to be build;
- (b) NHD is a dummy variable for implementing agencies (where 1 is assigned to NHD and 0 is assigned to other agencies);
- (c) STATUS3 is a dummy variable for project completion within plan or outside the intended plan (where 1 is assigned to "completed within plan" and 0 is assigned to "completed outside the intended plan"), and:

(d) PAHANG is a dummy variable for the state (where 1 is assigned to state of Pahang and 0 is assigned to other states). Pahang was the state with the longest time taken for the planning stage.

The test result revealed a high association between independent variables and dependent variable with a multiple-R of .79 and R-square of .63. The test produced a large F-value of 54.9 and significant t-value at an alpha .05 (except variable PAHANG with .18). This test showed that 63% of the regression slope for completion time explained by PLANSTAG and four other variables above. Variable STATUS3 (completion within five-year plan or otherwise) produced a large t-value of 7.7 and significant t-value of .0000. This implies that the completion time is very significant to the project completion status.

Table 10.9:

RELATIONSHIPS BETWEEN THE PLANNING STAGE AND PERFORMANCE
BY LENGTH OF TIME (FORMOCC)

Dependent Variable: Total Project Completion Time (FORMOCC)

Multiple R	.79478	Analysis of Variance	D.F.	S.S.	F-Value
R Square	.63167	Regression	5	111602.72	54.88
Adjusted R Square	.62016	Residual	160	65074.81	Significant of F .0000
Standard Error	20.16724				
Variable	B	Beta	Standard Error	T	Significant of T
PLANSTAG	.650205	.399388	.088460	7.350	.0000
TARGET	.02485	.209714	.005857	4.245	.0000
NHD	7.02034	.099809	3.487107	2.013	.0458
STATUS3	29.483113	.429121	3.827404	7.703	.0000
PAHANG	6.312824	.068050	4.683454	1.348	.1796
Constant	31.859883		3.669105	8.683	.0000

Source: Researcher's First Stage/Quantitative Data Collection

A series of other analyses was also conducted by using other variables with other states and agencies' dummy variables. These tests produced similar results and nearly the same multiple R, R-square, F value and significant level. However these tests produced different t-values for states and agencies' dummy variables.

Decision on Relationships of Planning Stage and Implementation Process

Results of analysis described above support that the planning stage is significantly related to subsequent stages. Results of regression analysis from Table 10.7 showed that relationships between the planning stage (PLANSTAG) and the time taken for project completion (FORMOCC) became stronger when other variables of subsequent implementation stages were included in the analysis. Also in Table 10.9 the analysis showed strong relationships of the formulation and planning stage with the project completion time when other variables of project target (TARGET), the National Housing Department (NHD) and the project completion status (STATUS3) were included in the regression analysis.

VARIATION OF TIME TAKEN IN IMPLEMENTATION PROCESS

Statement 1d proposes "that the length of time spent on the whole implementation process varies significantly between five-year plans, states and implementing agencies." As discussed in Chapter 8, there is no significant difference between the three five-year plan in relation to the time taken to complete the housing projects. Analysis of variance comparing the four implementation stages and the states is shown in Table 10.10. Analyses were for the sample of 166 completed projects and the sample of all 215 projects. Table 10.10 shows that there are significant difference between the states in completing the planning stage (PLANSTAG variable) and the time taken to complete the project (FORMOCC variable). While there is no significant difference for the resourcing stage and construction stage. This analysis produced similar results either the sample of 215 projects or the 166 completed projects.

Table 10.10:

ANALYSIS OF VARIANCE OF THE TIME TAKEN AT THE
IMPLEMENTATION STAGES BY STATES 1976-1990

(95% confidence interval)

Variable	F-Ratio	F-Prob	N and d.f.	Decision	Notes on Samples
PLANSTAG	3.2555	.0048	N = 165	Significant difference	(a)*
	3.4780	.0028	N = 186	Significant difference	(b)**
RESOCING	.9839	.4381	N= 163	Not Significant	(a)*
	1.2917	.2636	N = 172	Not Significant	(b)**
CONSTRUC	1.7459	.1137	N = 165	Not Significant	(a)*
	1.6075	.1481	N = 168	Not Significant	(b)**
COMSTAGE	2.0928	.0578	N = 165	Not Significant	(a)*
	1.1148	.3562	N = 165	Not Significant	(b)**
FORMOCC	3.2574	.0048	N = 165	Significant difference	(a)*
	3.2574	.0048	N = 165	Significant difference	(b)**

Notes:

(a)* samples are based on 166 completed projects

(b)** samples are based on 215 projects which included uncompleted projects.

Source: Researcher's First Stage/Quantitative Data Collection**Variation Between States and Plans**

Data analysis by ANOVA test was carried out to test the relationship between FORMOCC and two independent variables, PLAN and STATES. The result of this analysis is shown in Table 10.11 which confirmed that variability occurred to the time taken in the implementation process by the five-year plan and states. The variable STATES produced an F-value of 2.652 and significant of .018, whereas the PLAN variable produced a small F-value of .227. These two variables interact and produced the main effect's F-value of 2.012 and significant at an alpha of 0.05.

Table 10.11 :

**ANALYSIS OF VARIANCE OF PROJECT COMPLETION TIME BY STATES
AND FIVE-YEAR PLANS**

FORMOCC Completion time from project formulation to occupation
by PLAN plan
STATE State
UNIQUE Sums of squares
All effects entered simultaneously

Source of Variation	Sum of Squares	D.F.	Mean Square	F-Value	Significant of F
Main Effects	15959.677	8	1994.960	2.012	.049
PLAN	451.108	2	225.554	.227	.797
STATE	15780.464	6	2630.077	2.652	.018
2-Way Interactions					
PLAN	12476.760	11	1134.251	1.144	.332
STATE	12476.760	11	1134.251	1.144	.332
Explained	31880.153	19	1677.903	1.692	.044
Residual	144797.371	146	991.763		
Total	176677.524	165	1070.773		

Note: 166 cases were processed. 0 cases (0 pct) were missing.

Variations Between Agencies

There were significant difference between the three agencies in relation to the time taken on some of the implementation processes and to complete the housing projects. There were significant difference between these agencies for the starting of construction (FORMBEGN), completion of building construction (SPAN) and the total time taken to complete the project (FORMOCC variable). PWD had the shortest time taken completing these stages, followed by SEDC, while NHD was the longest. However, analysis of variance comparing between agencies and the four implementation stages (the planning, resourcing, construction and completion stage) produced results of no significant difference.

Table 10.12 below compares project completion time by implementing agencies. This table shows that each of the agency has a lower percentage of projects completed in less than five years, while a larger percentage of their projects completed in more than five years. However, comparing between the three agencies, PWD has bigger percentage (44%) of projects completed within less than five years. The chi-square test produced a value of 8.14 where interpreted as there is a significant association between variables at an alpha of .05. This chi-square test confirms that in the population as a whole there was an association between the agency and the length of time of project completion of more than five years.

Table 10.12:
CROSS-TABULATION BETWEEN PROJECT COMPLETION TIME AND
IMPLEMENTING AGENCIES

Projects' Completion Time		Agencies			
		NHD	SEDC	PWD	Total
Completed less than 5 years	N	8	23	14	45
	<i>Expected</i>	14.1	22.1	8.7	
	Row %	18%	51%	31%	
	Column %	15.4%	28%	43.8%	27.1%
Completed more than 5 years	N	44	59	18	121
	<i>Expected</i>	37.9	59.8	23.3	
	Row %	36.4%	48.8	14.8%	
	Column %	84.6%	72%	56.2%	72.9%
		N = 52 31.3%	N = 82 49.4%	N = 32 19.3%	N = 166 100%
Chi-square		= 8.14		Sig. P > .05	

Minimum expected frequency 8.7, cell with expected frequency <5 = 0, missing observation = 0

Table 10.13 below shows that each implementing agency has a larger proportion of projects completed outside the intended plan. The chi-square test was used to examine the existence or absence of a relationship between implementing agencies as an independent variable and the project completion status as a dependent variable. The test provides a chi-square of 5.34 and significant value of .06928 which interpreted as significant association between variables at an alpha of .07. This chi-

square test rejects that no association is true. However, PWD had a larger proportion (47%) of projects completed within the same plan than two other agencies.

Table 10.13:

**CROSS-TABULATION BETWEEN STATUS OF COMPLETION AND
IMPLEMENTING AGENCIES**

		Agencies			
		NHD	SEDC	PWD	Total
Completed Within Same Plan	N	12	30	15	57
	<i>Expected</i>	17.9	28.2	11	
	Row %	21%	52.6%	26.3%	
	Column %	23%	36.6%	46.9%	34.3%
Completed Outside Intended Plan	N	40	52	17	109
	<i>Expected</i>	34.1	53.4	21	
	Row %	36.7%	47.7%	15.6%	
	Column %	77%	63.4%	53.1%	(65.7%)
		52 (31.3%)	82 (49.4%)	32 (19.3%)	166
Chi-square		5.34	Sig > .07		

Minimum expected frequency 10.9, cell with expected frequency <5 = 0, missing observation = 0

Further, another ANOVA test was carried out to find the difference of five-year plan (PLAN) and implementing agency (AGENCY) toward the dependent variable, the time taken to complete the project (FORMOCC). The result showed there was interaction between the two independent variables (see Table 10.14). The main effect showed a significant difference between the independence variables and the dependent variable. The agency's variable produced a larger F-value of 5.731, whereas the five-year plan's variable (PLAN) produced only a small F-value of .401. This implied that agency variable is very significant to the completion of the project.

Table 10.14:

ANALYSIS OF VARIANCE OF PROJECT COMPLETION TIME AGENCY AND
FIVE-YEAR PLANS

FORMOCC Completion time from project formulation to occupation
by PLAN Five-year Plan
AGENCY Agency
UNIQUE Sums of squares
All effects entered simultaneously

Source of Variation	Sum of Squares	D.F.	Mean Square	F-Value	Significant of F
Main Effects	12153.551	4	3038.388	2.972	.021
AGENCY	11718.359	2	5859.179	5.731	.004
PLAN	819.316	2	409.658	.401	.671
2-Way Interactions	5632.872	4	1408.218	1.377	.244
PLAN STATE	5632.872	4	1408.218	1.377	.244
Explained	16162.044	8	2020.256	1.976	.053
Residual	160515.480	157	1022.392		
Total	176677.524	165	1070.773		

Note: 166 cases were processed. 0 cases (.0 pct) were missing.

Another analysis was carried out by combining all the three variables: the five-year plan (PLAN); the states (STATES), and; the implementing agencies (AGENCY). The result of this analysis is shown in Table 10.15. Two-way interaction amongst variables was not produced by this test. These three variables have cancelled their interaction amongst themselves. However, the result show a significant difference with the result of significant F at .016 which is smaller than alpha .05. Finally, regression analysis tests were carried out to examine relationships of total completion time (FORMOCC) with PLANSTAG, FORMBEGN and SPAN with all agencies and states dummy variables. The tests produced results from moderate to strong multiple R values with large F-values and significant t-value of .00005 for PLANSTAG, FORMBEGN and SPAN variables. However these tests did not produced significant t-value for any of agency or state's dummy variables.⁽⁴⁾

Table 10.15:

ANALYSIS OF VARIANCE OF PROJECT COMPLETION TIME BY STATES
AND FIVE-YEAR PLANS

FORMOCC Completion time from project formulation to occupation
by PLAN Plan
STATE State
AGENCY Agency
UNIQUE Sums of squares
All effects entered simultaneously

Source of Variation	Sum of Squares	D.F.	Mean Square	F-Value	Significant of F
Main Effects	22653.843	10	2265.384	2.280	.016
PLAN	230.434	2	115.217	.116	.891
STATE	12124.671	6	2020.778	2.034	.064
AGENCY	3250.451	2	1625.225	1.636	.198
Explained	22653.843	10	2265.384	2.280	.016
Residual	154023.681	155	993.701		
Total	176677.524	165	1070.773		

Note: 166 cases were processed. 0 cases (.0 pct) were missing.

The results of these ANOVA tests confirmed that variations occurred between states and implementing agencies. However, there was no significant difference between the three five-year plans.

Summary of results

In this quantitative data analysis four statements were tested as to an approach to assist hypothesis testing. The summary of the results of the statements as follows:-

- Statement 1a: confirmed that a large proportion of projects were completed in more than five years time span whereas a smaller proportion of projects were completed in less than five years.
- Statement 1b: partially supported since not all the preparation variables did not produce the same results. It is clear three variables SURVEY, IDENTIFY and LANDREPT have relationship with project completion time.

- **Statement 1c:** confirmed that there is relationship between earlier stage and subsequent stages and also planning stage to the whole implementation process.
- **Statement 1d:** confirmed that there was variation in the time taken in completing the projects amongst five year plans and states because there was interaction between plans and states, however there was no significance between five-year plans. There were variations of the time taken in completing the projects amongst the implementing agencies.

These results confirmed that the shortfall of the public low-cost housing programme performance was associated with the inadequacy of preparation and problems occurred at the planning stage. Some projects performed better because preliminary investigation was conducted earlier even before the formulation stage. The performance of this programme is also affected by other variables such as the states and implementing agencies. Programme performance was affected by the project delays because of inadequate proposal preparation, inadequate planning and not working as planned. The implementation of this programme has undergone several five-year plans but it is unlikely that strong evidences existed of the learning process influencing performance improvement.

QUALITATIVE DATA ON THE PLANNING HYPOTHESIS

After analysing the hypothesis based on the quantitative data, the qualitative data set is now used to examine it.

Respondents' View

Analyses from respondents views about what happened to schemes indicated that the preparation of projects was faced with inadequate guidelines for project formulation and that proposals for sites were not made cautiously. Proposals for projects were then made in a hurry as a result of inadequate time during the preparation stage. Then, during the planning stage problems of site and land selection occurred, which affected programme performance. A selection of views from interview excerpts explain problems at the formulation and planning stage, as follows:-

(1) Chali, mentioned over-simplification of project appraisal and summed up the root of the problem:-

“Projects were not cautiously selected by certain people, in addition to lack of clear guidelines... They did not understand what type of land was suitable for housing development..., the root of the problem was because of no proper planning.” [Chali, 2.12.1994]

(2) Another respondent, Ras, was of the opinion that project preparation was done in a hurry and based on inadequate information:-

“...the project preparation was done in a hurry, adequate time was not given, a proposal was not made based on housing demand and also it was also subjected to too many weaknesses...when the Ministry questioned them about the projects priority and detailed site information, the states were always unable to furnish us with adequate information.” [Ras, 14.11.94]

(3) Kas, mentioned that the problem faced at the formulation and planning stage was in relation to inadequate time and inadequate preparation for project proposals :-

“...when received the directive from the Ministry, the state’s housing division instructed further the district offices at the district level to come up with the list of projects. Since the time was too short therefore some districts proposed projects which they already had proposed in the past plans which were turned down due to the allocation constraints and rescheduling of priorities in those past plans.” [Kas, 18.11.1994]

(4) Zaky said that inadequate project appraisal was inter-related with other problems:-

“The trouble was that the state did not properly check the proposal but just accepted whatever proposal was forwarded even by the most junior staff... Selection of site was not carefully done... This in fact affected the overall planning very much. This was the main problem because the projects lacked viability and readiness besides the states themselves lacked capability.... In addition, what was lacking was also a blue print of housing development for the

state which in a way could tell the appropriate housing demand for certain localities. ” [Zaky, 14.11.1994]

(5) On the other hand, Halo who was another respondent, believed that projects must be flexible to adapt to changes in the overall planning scenario.

“Problems occurred when the states failed to revise their projects. They were still proposing and proceeding with the projects for the next plan, although there wasn’t anymore demand or adequate anticipated population to support the projects. The projects were also not flexible enough to adjust to changes in the surrounding areas or changes with other policies...the housing project still proceeded as planned although there was a decision to cancel the proposed new township development plan... this has resulted in the project being faced with implementation problems. ”[Halo, 23.11.1994]

These issues of project preparation and planning, can be clustered into the ‘thinking units’⁽⁵⁾ as follows:-

- (a) unclear guidelines,
- (b) site identification,
- (c) selection of site, and
- (d) land and site selection.

First, inadequate project preparation occurred as a result of unclear guidelines and of rushing to meet the deadlines. As a result, some of these projects were not carefully prepared. Some were inadequately prepared and submitted in the belief that errors could be rectified later. The time given to preparing the list of projects was inadequate for anyone concerned to meet deadlines. Many respondents commented that project proposals were *“made in a hurry with a sacrifice of quality,”* and believed this caused some of the later problems.

Second, the problem related to site identification. Sites for the majority of projects, when proposed to the state and central agencies, were not identified. The list usually consisted information about locations, the numbers of houses proposed and approximate allocations required. Selection of sites was usually made after these projects had been affirmed as approved projects for the five year plan. It seems that projects with problematic site selection were the uncompleted or slow projects. For example, during the 4MP the SHD was given only one month to resubmit proposals

to the Ministry. As a result, the SHD instructed district offices to produce a list of projects within only two weeks.

A large majority of projects identified their sites after they were approved for the particular five year plan. Only six of completed projects (Trunkville, Stony River, Manor 3, Lakesland, Ficuswood and Pumpkinville) had identified their sites during the project formulation stage. For example, the site for Pumpkinville had been identified where a land report was made one year prior to the formulation stage. For another project, Stony River, the land was confirmed and ready for this project. In contrast, indecisiveness occurred for the Trunkville project, although its site had been planned since 2MP in 1971. Project sites for all the six uncompleted projects were never identified at this stage. They were identified later after the project had been approved for the respective five year plans.

Third, site selection for projects is one of the important criteria associated with the project performance. Site selection is the decision on the site identified for the projects. Average and fast projects demonstrated that sites were selected early as well as the state taking a firm stance on their decisions. In contrast, uncompleted and slow projects showed indecisiveness, change of sites and delays in making decisions about the site. A number of respondents at the implementing agencies questioned why they only came into the picture after sites had been selected. They argued that better sites would have been selected if their advice had been sought. A few respondents argued that site selection was not properly done during the early stage of programme preparation; they were just to accommodate the list of projects to be submitted to the central agencies. Site selection was done without proper feasibility studies.

Fourth, the issue of land and site selection are inter-related. A few programme administrators view of the problem of site selection as becoming progressively more difficult, because state land has become scarce, while private land has become more expensive. Rapid development in some of the districts caused competition for land between public low cost housing development and other uses.

The common consensus among respondents was the difficulty which occurred at the formulation and planning stage where the root was the land problem: difficulty in getting state land, difficulty in selecting suitable land, the lengthy process of acquiring private land, the high cost of compensation for land, the high price of private land, the high cost of developing unsuitable state land, squatters on the land,

competing use of land and land becoming increasingly scarce, especially in the urban areas.

Why was suitable land not always available for projects? Analysis from the responses by respondents showed that the problem began because of the 'vague and too broad guidelines' provided during the preparation stage. At this stage the decision on site selection was purely a task given to the District and Land Office. Only at later stage did this involve other actors and agencies in the form of sanction, reporting or consultation with others, such as local authorities and councillors. The actions related to overcoming problems of land acquisition and squatters was dependent upon action and priorities set by the District and Land Office. The problem become worse when the states were indecisive and changed decisions about sites selected. Examples from several schemes showed that this land problem caused delays in project implementation so that, projects were unable to complete within their intended plan and the total project costs increased.

Analysis from the qualitative data also noting that there were difference at the preparation and the planning stage adopted by the states. Negeri Sembilan requested that land report for identified sites be prepared by district and land offices. This report was discussed at the state level committee at which representatives from the state level agencies were presented. Until 1995, all government projects in this state were exempted from obtaining planning permission from local authorities. In contrast, during 4MP, Perak sought other agencies comments when site selection was made. This enabled better site selection. In Selangor, projects were discussed at the district level inter-agency meetings. Thus, more co-operation and less resistance to this programme were obtained by its two implementing agencies. However, NHD faced difficulties because it was not represented at the district level meetings. During 4MP all proposals for public low-cost houses in the state first went through the State Liaison Committee before they were submitted to MHLG. This committee was chaired by the "Menteri Besar" or Chief Minister of the state and was responsible for ensuring the smooth implementation of all low cost housing projects in the state.

Conclusion

Evidences from the quantitative data showed that the preparation and planning stage has significant relationships with programme performance. The preparation and planning stage produced a strong relationship with the time taken for the completion. Qualitative data analysis confirmed this, especially with respect to planning guidelines and site identification.

SECTION TWO: PROGRAMME FUNDING AND RESOURCING - HYPOTHESIS TWO

The Hypothesis

Resources are important and must be provided adequately to ensure programme success. As discussed in Chapter 5, the provision of more funds was one of the measures to overcome increased project costs and to cater for bigger housing targets. However, funds were still inadequate because: (a) the funds allocated to finance each project was lower than actual project costs, and; (b) project estimates were lower than total costs when completed, and (c) delays in starting constructions caused the project costs increased due to inflation. The government's funding arrangements were slow respond to project cost increases. Although the states asked for additional funding from the federal government, they finally had to use their own funding to cover additional costs for land, building construction, infrastructure, contribution fees and other costs for the projects.

Realising the importance of financial resources for programme success, the following hypothesis concerning programme funding is developed:-

Hypothesis 2: "The performance of the public low-cost programme is dependent on the allocation of resources devoted to it; delays in implementing the projects caused cost increases and the programme was also affected by inflation; as a result the states have to meet project cost from their own funding."

This hypothesis predicts that there are relationships between implementation performance, funding, the length of time taken, states and implementing agencies. The above hypothesis will be tested according to the statements as follows:

Statement 2a: "That the amount of funds provided by the federal government for the public low-cost housing programme varies significantly between five-year development plans and between states."

Statement 2b: "That the amount of funds provided by the federal government for the public low-cost housing programme was lower than the total project cost."

Statement 2c : "Programme implementation performance is associated with the availability of funds; projects which utilise financial "revolving funds" exhibit better performance than projects which do not utilise financial "revolving funds."

Statement 2d : "That there is an association between the total project costs and the length of time taken for project completion; the longer time needed for the project implementation process, the higher the project costs."

Statement 2d is the most important where it attempts to relate the amount of project cost and the time taken to complete the project. When delays occurred in project implementation then the project costs would increased as the result of inflation. Thus, project estimates were no longer valid and as a consequence large proportions of projects had their total cost more than the estimated project cost.

VARIATIONS IN ALLOCATION OF FUNDS

Funds provided by the federal government for the public low-cost housing programme varies significantly between five-year development plans and between states. Recalling the discussion of the same subject in the previous Chapter 8 we found that the amount of funds allocated (per unit) to this programme varies between plans and amongst states. (Refer to Table 8.40 that provides information on means and standard deviations of housing allocation per unit for the 215 cases.) For the whole of three five-year plans the mean was \$11,319 per unit with a standard deviation of \$5,209. This mean of allocation per unit increased as the five-year plan headed towards the 1990s. During 3MP the mean of allocation was \$8,137 per unit, then in 4MP it increased to \$13,526 per unit and finally to \$16,361 per unit during 5MP.

Table 10.16 below provides information regarding the mean of project allocation per unit of house by states and plans based on the sample of completed 166 projects. This table shows that the amount of funds allocated to this programme is increasing from the average of \$8,194 in 3MP to \$13,942 in 4MP and finally to \$15,766 in 5MP. The allocation of funds per unit of houses shows variations between states in each plan. For example in 3MP, the lowest was Pahang with \$7,264 and the highest was Pulau Pinang with \$9,970 per unit. Similarly within the states and between plans show variability; for example, Johor was allocated with \$9,598 in 3MP, then \$17,959 in 4MP and slightly reduced in 5MP with \$15,557 per unit of house. In

general the amount of funds allocated per unit to states shows the increased of allocation from the 3MP to 5MP with the exception to Johor in 4MP and Pulau Pinang in 4MP.

Table 10.16:

PROJECTS' MEAN ALLOCATION OF FUNDS (PER UNIT OF HOUSE) BY STATES, AND PLANS

(Based on 166 Completed Cases)

States	3MP	4MP	5MP	Total (Average for State)
JOHOR	\$9,598	\$17,959	\$15,557	\$14,312
NEG. SEMBILAN	\$7,733	\$15,180	\$15,770	\$11,484
SELANGOR	\$7,881	\$11,140	-	\$9,674
PERAK	\$7,924	\$11,201	\$15,000	\$9,583
PULAU PINANG	\$9,970	\$24,586	\$14,813	\$16,662
PAHANG	\$7,264	\$13,340	\$17,778	\$10,350
TRENGGANU	\$8,817	\$11,389	\$15,140	\$10,350
TOTAL (Average for Plan)	\$8,194	\$13,942	\$15,766	\$11,304

Source: Researcher's First Stage/Quantitative Data Collection

Table 10.17 below shows that the amount of funds allocated to this programme varied for each states and between plans for projects completed within the plan and projects completed outside the intended plan. In general, allocation per unit is higher when projects are completed outside the intended plan. This is because when projects were not completed within the same plan states asked additional allocation to cover the anticipated cost increases, from the federal government.

Table 10.17:

PROJECTS' MEAN ALLOCATION OF FUNDS (PER UNIT OF HOUSE) BY STATES, PLANS AND STATUS OF COMPLETION.

(Based on 166 Completed Cases)

States/Status	3MP	4MP	5MP	Total
JOHOR	\$9,598	\$17,959	\$15,557	\$14,312
Completed Within Plan	-	\$14,731	-	
Completed Outside Plan	\$9,598	\$19,343	\$15,557	\$14,234
NEGERI SEMBILAN	\$7,733	\$15,180	\$15,557	\$11,484
Completed Within Plan	\$6,488	\$13,857	\$15,770	\$11,101
Completed Outside Plan	\$8,445	\$16,504		
SELANGOR	\$7,881	\$11,140	-	-
Completed Within Plan	\$7,929	\$11,502	-	-
Completed Outside Plan	\$7,851	\$10,890	-	-
PERAK	\$7,924	\$11,201	\$15,000	\$9,583
Completed Within Plan	\$7,505	\$12,734	-	
Completed Outside Plan	\$8,238	\$10,761	\$15,000	\$9,823
PULAU PINANG	\$9,970	\$24,586	\$14,813	\$16,662
Completed Within Plan	\$8,560	\$25,000	\$14,125	\$16,116
Completed Outside Plan	\$11,380	\$24,172	\$15,550	\$17,207
PAHANG	\$7,264	\$13,340	\$17,778	\$10,350
Completed Within Plan	\$4,754	\$11,355	-	
Completed Outside Plan	\$7,949	\$12,520	\$17,778	\$10,350
TRENGGANU	\$8,817	\$11,389	\$15,140	\$10,350
Completed Within Plan	\$8,451	\$11,355	-	
Completed Outside Plan	\$9,000	\$11,423	\$15,140	\$10,831
TOTAL	\$8,194	\$13,942	\$15,766	\$11,304
Completed Within Plan	\$7,376	\$14,028	\$14,673	\$11,028
Completed Outside Plan	\$8,588	\$13,889	\$16,130	\$11,448

Source: Researcher's First Stage/Quantitative Data Collection.

An investigation was also carried out in relation to a number of cells that have a lower allocation per unit when projects were completed outside the intended plan as in Table 10.17. These projects were initiated in 4MP (1981) and delays in the starting of the construction had occurred. Their construction began in 1984 to 1987 and

completed between 1985 and 1990. During 1985 to 1988, Malaysia had experienced an economic recession that resulted in a cut of public spending. Thus, additional allocation to cover the increased cost of these project was not provided by the federal government. This explains why projects completed outside intended plan for 4MP had a slightly lower of allocation of \$13,889 when compared to projects completed within plan with the mean allocation of \$14,028.

To test whether variations in the allocation of funds were statistically significant, the ANOVA test was utilised. In the test, the allocation of funds per unit was used as a dependent variable against plans and states as the independent variables (see Table 10.18) . The result of the test provided the main effects of variable plan and states with a large F-value of 19.7 and the level of significance of .00005.⁽⁶⁾ Each of this variables (PLAN and STATES) individually also produced a statistical significance to the dependent variable of .00005. We can notice this by the large value of sum squares contributed by both variables PLAN and STATES. The test further showed that there was interaction between the independent variables and the dependent variable on the allocation of funds per units. The explained source of variations between groups produced an F-ratio of 11.03; a value which is significant at the level of .00005. This interpreted as the dependent variables PLAN and STATES jointly explained the differences in the dependent variable allocation of funds per unit. Therefore we can confirm that the amount of funds provided by the federal government for the public low-cost housing programme varies significantly between five-year development plans and between states.

Table 10.18: DIFFERENCES BETWEEN ALLOCATION OF FUNDS (PER UNIT) TO THE STATES AND PLANS

(Based on 166 Completed Cases)

Dependent Variable: Allocation of Funds (Per Unit) ALL\$UNIT

Source of Variation	Sum of Squares	D.F.	Mean Square	F-value	Significant of F
Main Effects	2082214433	8	260276804.083	19.715	.000
PLAN	1541066878	2	770533439.185	58.365	.000
STATES	389338231	6	64889705.085	4.915	.000
2-Way Interactions	582073721	11	52915792.808	4.008	.000
PLAN STATES	582073721	11	52915792.808	4.008	.000
Explained	2766732792	19	145617515.383	11.030	.000
Residual	1927489203	146	13201980.841		
Total	4694221995	165	28449830.273		

Source: Researcher's First Stage/Quantitative Data Collection

Another ANOVA test was carried out to examine whether the said statement is still valid if one more variable, the project's completion status (STATUSIN) is introduced in the analysis (see Table 10.19 below). Although the analysis shows no interactions between three variables (PLANS, STATES and STATUSIN), the result still shows significant differences by the joint effect of the three independent variables to the dependent variable.

Table 10.19 :

DIFFERENCES BETWEEN ALLOCATION OF FUNDS (PER UNIT) TO THE STATES, PLANS AND STATUS OF COMPLETION

(Based on 166 Completed Cases)

Dependent Variable: Allocation of Funds (Per Unit) ALL\$UNIT

Source of Variation	Sum of Squares	D.F.	Mean Square	F	Significant of F
Main Effects	2201078950	9	244564327.813	15.303	.000
PLAN	1343524179	2	671762089.736	42.033	.000
STATES	660276782	6	110046130.296	6.886	.000
STATUSIN	16419879	1	16419878.925	1.027	.312
Explained	2201078950	9	244564327.813	15.303	.000
Residual	2493143045	156	15981686.184		
Total	4694221995	165	28449830.273		

Source: Researcher's First Stage/Quantitative Data Collection

RELATIONSHIPS AMONGST ALLOCATION OF FUNDS, LOAN APPROVED AND PROJECT COST

After examining variations in the allocation of funds to states and plans, this section examines the amount funding allocated by the federal government in relation to the total project cost. It is predicted :-

“That the amount of funds provided by the federal government for the public low-cost housing programme was lower than the total project cost.”

Data analysis for this testing is based on the comparison of: (a) projects completed within the same five-year plan, and; (b) projects completed outside the intended plan. Table 10.20 below shows the amount of funding based on the three five-year plans and categorised into (a) the average allocation of funds per unit of house; (b) the average project estimated cost per house; (c) the average amount of loan approved per house; (d) the average amount of construction tender price per house; (e) the average total project cost per house; and (f) the average total project cost house adjusted to 1990's price.

Table 10.20:

COMPARISON OF PROJECTS FUNDING BY PLANS

(Based of 166 Completed Projects)

	3MP	4MP	5MP	Total Cases (missing)
Allocation Per Unit	\$8,194	\$13,978	\$15,766	165
Completed Within Plan	\$7,376	\$14,129	\$14,673	(1)
Completed Outside Plan	\$8,588	\$13,889	\$16,130	
Estimate Per Unit	\$10,683	\$19,706	\$21,238	162
Completed Within Plan	\$9,381	\$19,427	\$25,370	(4)
Completed Outside Plan	\$11,310	\$19,670	\$19,861	
Loan Approved Per Unit	\$10,396	\$19,258	\$17,291	166
Completed Within Plan	\$7,689	\$17,450	\$16,298	(0)
Completed Outside Plan	\$11,700	\$20,360	\$17,622	
Tender Price Per Unit	\$11,106	\$17,001	\$22,130	166
Completed Within Plan	\$8,045	\$16,182	\$23,628	(0)
Completed Outside Plan	\$12,579	\$17,500	\$21,632	
Total Project Cost Per Unit	\$12,342	\$20,353	\$24,291	166
Completed Within Plan	\$8,718	\$18,945	\$26,925	(0)
Completed Outside Plan	\$14,088	\$21,210	\$23,412	
Project Cost Per Unit Adjusted to 1990's price	\$15,268	\$21,311	\$23,132	166
Completed Within Plan	\$12,801	\$21,049	\$29,095	(0)
Completed Outside Plan	\$16,456	\$21,471	\$21,144	

Source: Researcher's First Stage/Quantitative Data Collection

Analysis from this table shows a pattern of project funding and resourcing. Firstly, there are differences between projects completed within the same plan and projects completed outside the intended plan. In general, projects completed outside the intended plan cost more than those completed within the same plan. Secondly, the projects were allocated with inadequate funding where the amount of funding allocated and the amount of loan approved were lower than construction tender price and total project cost per unit. As a result, the state governments had to bear the differences between the total cost and the funding provided by the federal government.⁽⁷⁾ About 51% of these projects had their total cost more than the amount of loan approved, while another 36% with total cost equal to the amount of loan provided, and 13% with total cost lower than the amount of loan approved. Thirdly, the mean of project estimate was lower than the cost of construction tender and total project cost. About 59% of projects had their total cost above the estimated cost.⁽⁸⁾ Also 40% of the projects required one or more additional loan to meet the total project cost (see Table 8.43 in Chapter 8). This occurred because there was a lapse of time between when the estimate was made and when the actual construction was carried out. The mean time lapse between these two periods for the three plans was almost four years (47.8 months). This explains why project estimates were no longer accurate. Table 10.21 below provides information on the time taken between when the project estimates were made and the time of project completion by plan and by the project completion status. Finally, the project cost more as the project progressed from 3MP to 5MP. This can be seen where the average total project cost was increasing from \$12,342 in 3MP to \$20,353 in 4MP and finally to \$24,291 in 5MP. A similar increasing pattern also occurred when the mean for total project cost per unit is calculated into 1990's price: \$15,268 in 3MP, \$21,311 in 4MP and \$23,132 in 5MP.

Table 10.21:

**THE TIME TAKEN BETWEEN PROJECT'S COST ESTIMATE MADE AND
PROJECT COMPLETION**

(Based on 166 Completed Cases)

Plan	3MP (months)	4MP (months)	5MP (months)
Mean For the Plan	44.7	51.6	42.1
Complete Within Plan	27.8	29.1	16.2
Complete Outside Plan	53.1	65.7	50.8
Number of Cases	78	70	12

Source: Researcher's First Stage/Quantitative Data Collection.

Based on the comparisons of programme funding and resourcing between the three five-year plans and the project completion status (completed within or outside plan) we can summed up: that the amount of funding provided by the federal government was lower than the total project cost. Projects also cost more if they were not completed within the same plan. Project cost increased in nominal term as well as in 1990's price. This has constrained the performance of this programme. Two reasons were associated with this problem: (a) poor project estimation, and (b) delays in implementing the projects which were therefore affected by inflation.

The following Table 10.22 provides correlation between the six funding and resourcing variables. The correlation between allocation of funds per unit and adjusted total project cost per unit is low with the value of 0.37. Whereas the correlation between allocation of funds per unit and other five variables is modest. The amount of loan approved per unit has a high relationship with project cost per unit.

Table 10.22:

**CORRELATION BETWEEN SEVERAL FUNDING AND RESOURCING
VARIABLES**

Variables	1	2	3	4	5	6
1. ALL\$UNIT Mean Allocation of Funds for Projects per unit	1.0					
2. E\$TUNIT Estimated Amount of Project Cost per Unit	.49	1.0				
3. APP\$UNIT Amount of Loan Approved per Unit	.59	.72	1.0			
4. TDR\$UNIT Amount of Project's Construction Tender Per Unit	.47	.71	.65	1.0		
5. CO\$TUNIT Total Project Cost per Unit	.46	.82	.79	.87	1.0	
6. ADJ\$UNIT Adjusted Total Project Cost per Unit in 1990's Price	.37	.80	.70	.81	.95	1.0
Number of Cases	166	162	166	161	166	166
Mean	\$11,304	\$15,364	\$14,846	\$14,531	\$16,777	\$18,531
Standard deviation	\$5,334	\$7,237	\$6,529	\$6,340	\$7,086	\$6,713

Note: Correlation of .05 or greater are significant when two-tailed are used.

Source: Researcher's First Stage/Quantitative Data Collection.

REVOLVING FUNDS AND PROGRAMME PERFORMANCE

The discussion in Chapter 5 mentioned that the Federal government decided in January 1978 to set up revolving funds of \$5 million for each state government to assist in speeding up the construction of public low cost houses. This enabled the state governments to make payment for the construction of public low-cost houses while waiting for the loan withdrawal from the federal government. These funds were to be utilised for the payment of land acquisition, site preparation and infrastructure development while waiting for project loans approval by the Federal Treasury. Then in 4MP, the government increased the revolving funds from M\$5 to M\$20 million for each state.

It is predicted the utilisation of financial 'revolving funds' led to a shorter time taken to reach project completion and this to lower total project cost per unit. Therefore the following statement was developed:-

Statement 2c: "Programme implementation performance is associated with the availability of funds; projects which utilised financial "revolving funds" exhibited better performance than projects which did not utilise financial "revolving funds."

Table 10.23 provides a summary of information on the comparisons between projects which utilised revolving funds and projects which did not. In relation to this projects are compared between plans and their (a) average tender price per unit; (b) average total project cost per unit, and (c) average total project cost per unit adjusted to 1990's price. The majority of projects show that those utilised the "revolving funds" have higher cost than projects which did not utilised the revolving funds. This is contrary to the aim of the revolving fund to reduce the cost by speeding up the payment and as the result getting faster project completion. Another analysis was carried out to find whether this difference is statistically significant by engaging t-test. The result shows that they are statistically significant difference between the projects utilising and not utilising the revolving fund. The result of t-test on the variable "tender price per unit" (TDR\$UNT) produced an F-value of 6.960 , probability value equal to .009 with two-tail significant of .0005 at an alpha of .05. On the other hand, the of t-test on the variable "total cost per unit" (CO\$TUNIT) produced quite a large an F-value of 8.308 with probability value of .004 and a two-tail significant of .0005 at an alpha of .05. For the variable "adjusted total cost per unit in 1990's price" (ADJ\$UNIT) with an F-value of 8.398 with probability value of .004 and a two-tail

significant of .0005 at an alpha of .05. All these results show there is significant different of the project cost between utilising and not utilising the revolving funds. Therefore we can conclude that we failed to reject the statement that projects utilised revolving funds had performed better in terms of lower cost.

Table 10.23:

COMPARISON BETWEEN ON MEAN OF CONSTRUCTION TENDER PRICE FOR PROJECT UTILISED AND NOT UTILISED THE REVOLVING FUNDS

(Based on 166 Completed Cases)

	Tender Price Per Unit	Project Cost Per Unit	1990's Project Cost Per Unit	No. Of Cases
Mean for 3MP	\$11,106	\$12,343	\$15,269	80
Utilised Rev. Fund	\$11,595	\$15,304	\$17,501	4
Not Utilised Rev. Fund	\$11,080	\$12,187	\$15,151	76
Mean for 4MP	\$17,001	\$20,353	\$21,311	74
Utilised Rev. Fund	\$18,507	\$22,184	\$22,770	42
Not Utilised Rev. Fund	\$15,025	\$17,949	\$19,395	32
Mean for 5MP	\$22,130	\$24,290	\$23,132	12
Utilised Rev. Fund	\$22,021	\$24,377	\$23,470	11
Not Utilised Rev. Fund	\$23,334	\$23,334	\$19,413	1

Source: Researcher's First Stage/Quantitative Data Collection.

The issue of revolving funds was further analysed to see whether the time taken had any statistical significant difference between projects which utilised and did not utilise the funds. A similar approach using t-tests was adopted with the variables FORMBEGN and FORMOCC. Variable FORMBEGN is the time taken between the formulation of project and the beginning of construction. Whereas, the variable FORMOCC is the length of time taken from project formulation to the occupation of houses. The results of the tests carried are shown in Table 10.24 and 10.25 below. The tests show that projects utilised the revolving funds have longer completion time and longer time to begin construction of project. The result of the test shows that for FORMBEGN, there is statistically significant difference between projects using and not using revolving funds with F-value of 6.095 and two-tail significant of .017 at an alpha of .05. Similarly the result in table 10.25 for the variable FORMOCC shows a

statistically significant difference for projects utilising and not utilising the revolving funds, with F-value of 3.774 with two-tail significant of .019 at an alpha of .05.

Table 10.24:

UTILISATION OF REVOLVING FUNDS AND THE TIME TAKEN TO BEGIN THE PROJECT (FORMBEGN)

(Based on 166 Completed Cases)

Was Revolving Funds Utilised?	Mean (month)	Std.Dev (month)	Cases
Yes, Utilised	58.4	33.5	57
Not utilised	50.7	26.5	109
Mean difference/total	7.7		166
t-test for equality of means:			
F= 6.095			
P= .015			
2-tail significant =0.107 at alpha 0.05			

Source: Researcher's First Stage/Quantitative Data Collection

Table 10.25:

UTILISATION OF REVOLVING FUNDS AND THE TIME TAKEN FOR PROJECT COMPLETION (FORMOCC).

(Based on 166 Completed Cases)

Was Revolving Funds Utilised?	Mean (month)	Std.Dev (month)	Cases
Yes, Utilised	92	36.3	57
Not utilised	79.6	30	109
Mean difference/total	12.5		166
t-test for equality of means:			
F = 3.774			
P = 0.054			
2-tail significant = 0.019 at alpha 0.05			

Source: Researcher's First Stage/Quantitative Data Collection

RELATIONSHIP BETWEEN PROJECT COST AND THE TIME TAKEN

This is to test the relationship between the length of time taken as an independent variable and the total project cost as a dependent variable. The total project costs are calculated in terms of total project cost per unit of house built. The aim is to test the statement that there is an association between the total project costs and the length of time taken for project completion; the longer time needed for the project implementation process, the higher the project costs.

Statement 2d : “That there is an association between the total project costs and the length of time taken for project completion; the longer time needed for the project implementation process, the higher the project costs.”

The approach adopted in examining this statement is as follows: (a) analysing the general pattern of the mean project cost per unit by project completion time according to quartile; (b) analysing the general pattern of the project cost adjusted according to 1990's price by the quartiles of time taken; (c) analysing project cost by regression analysis (d) analysing the mean project cost per unit adjusted 1990's price with the time taken for completion by the regression analysis.

The project cost per unit and completion time by quartiles

This analysis involved the mean project cost per unit and project completion time according to quartile. The variable of time taken from formulation to occupation (FORMOCC) is further categorised into its quartiles known as FOROCQTL. As mentioned earlier in this chapter, the FOROCQTL variable is the time taken in completing projects which is divided into the four quartiles (refer page 371) The summary of project costing per unit based on quartiles of time taken is shown in Table 10.26 below. The mean and median of project cost per unit show that faster projects have lower cost than slower projects. For example the mean of project cost in the first quartile is \$14,093 while projects in the fourth quartile is \$19,564. The median for project cost in the first quartile is \$10,058 while the median for projects in the fourth quartile is \$20,534. This tells us that when a longer time is taken to complete the project, the higher will be its costs.

Table 10.26:

PROJECT PERFORMANCE BASED ON THE QUARTILE OF TIME TAKEN FOR THE WHOLE IMPLEMENTATION PROCESS.

	FORMCQTL Below 1st. Quartile	FORMCQTL 1st. Quartile	FORMCQTL 2nd. Quartile	FORMCQTL 3rd. Quartile
Mean	\$14,093	\$16,913	\$16,984	\$14,093
Median	\$10,058	\$14,913	\$16,069	\$20,534
Std. Deviation	\$8,190	\$7,167	\$5,980	\$5,985
Minimum	\$5,900	\$7,000	\$6,952	\$6,499
Maximum	\$32,000	\$40,324	\$40,028	\$34,756
No. of cases	41	41	41	42
Missing cases	0	0	0	0

Source: Researcher's First Stage/Quantitative Data Collection

Project Cost Adjusted to 1990's Price and Quartiles of Time Taken

A similar summary of project costing as in the earlier Table 10.26 was calculated in 1990's price as can be seen in Table 10.27 below. The mean and median of project cost still show that faster completed projects have lower total costs per unit, while slower projects have higher project cost per unit. The same table also provides information on standard deviations, and the minimum and maximum of project cost in 1990's price.

Table 10.27:

TOTAL PROJECT COST ADJUSTED TO 1990'S PRICE AND PROJECT RANKING BY QUARTILES OF THE TIME TAKEN FOR THE WHOLE IMPLEMENTATION PROCESS.

Time Taken	FORMCQTL Below 1st. Quartile	FORMCQTL 1st. Quartile	FORMCQTL 2nd. Quartile	FORMCQTL 3rd. Quartile
Mean	\$17,315	\$18,885	\$18,736	\$19,170
Median	\$14,195	\$16,900	\$18,390	\$19,460
Std. Deviation	\$8,139	\$7,447	\$5,871	\$5,189
Minimum	\$8,723	\$9,873	\$8,335	\$7,134
Maximum	\$34,820	\$44,556	\$42,448	\$30,144
No. of cases	41	42	41	42
No. of missing	0	0	0	0

Source: Researcher's First Stage/Quantitative Data Collection

Multiple Regression Analysis of Project Cost

An analysis by a simple bivariate regression was also made on the mean project cost per unit (CO\$TUNIT) and the time taken for completion (FORMOCC) as appears in Table 10.28. This aimed to test the degree of association and linearity of between these two variables. The multiple regression analysis test shows there was a linear relationship between the total project cost per unit and the time taken to complete the housing project. However the strength of association between these two variables were modest because the value of multiple-R was 0.41 only. The test produced the value of R-square of 0.17 that interpreted as only 17% of the variation in project cost per unit (CO\$TUNIT) was explained by the linear regression on the completion time variable (FORMOCC). The test also provided the constant of \$9,480 and unstandardised B equal to 71.8 months which the linear equation is equal to:-

$$Y' = \$9,480 + 71.8 X.$$

Table 10.28 :

RELATIONSHIPS BETWEEN TOTAL COST PER UNIT AND THE TIME TAKEN FOR PROJECT COMPLETION (FORMOCC)

Dependent Variable: Total Project Cost Per Unit (CO\$TUNIT)

Multiple R	.41271	Analysis of Variance	D.F.	S.S.	F-Value
R Square	.17033				
Adjusted R Square	.16480	Regression	1	847453921	30.79
Standard Error	52445.94	Residual	150	4127982120	Sig. F .000
Variable	B	S E-Beta	Beta	T	Sig.T
From Formulation to Occupation (FORMOCC)	71.7809	12.9318	.412708	5.549	.0000
Constant	9479.5827	1185.5377		7.996	.0000

Durbin-Watson test = 1.2

Notes:

This data analysis is based on 156 cases after excluded 10 cases with extreme values (outliers)

Source: Researcher's First Stage/Quantitative Data Collection

A similar analysis was also carried out engaging testing the relationship between the project cost per unit adjusted to 1990's price (ADJCUNT) as the dependent variable and time to complete the project (FORMOCC) as independent variable. The results are shown in Table 10.29. The test produced correlation result of multiple R of 0.24 where the strength of association between these two variable is low. The test also provided the constant of \$14,168 (in 1990's price) and unstandardised B equal to 36.3 months which the linear equation is equal to: $Y' = \$14,168 + 36.3 X$. However this is not a good predictor because the small R-square value of 0.06.

Table 10.29:

RELATIONSHIPS BETWEEN PROJECT COST PER UNIT ADJUSTED TO 1990'S PRICE AND PERFORMANCE BY TIME TAKEN (FORMOCC)

Dependent Variable: Adjusted Project Cost Per Unit (ADJCUNT)

Multiple R	.24021	Analysis of Variance	D.F.	S.S.	F-Value
R Square	.05770				
Adjusted R Square	.05133	Regression	1	214316834	9.06257
Standard Error	4862.9791	Residual	148	3499987767	Significant of F .0031
Variable	B	S E-Beta	Beta	T	Sig.T
Completion Time (FORMOCC)	36.2739	12.0495	.240209	3.010	.0031
Constant	14167.6649	1106.4139		12.805	.0000

Durbin-Watson test = 1.6

Notes:

This data analysis is based on 155 cases after excluded 11 cases with extreme values (outliers)

Source: Researcher's First Stage/Quantitative Data Collection

Multiple Regression When Accounting Several Other Variables

Table 10.30 provides a multiple regression predicting project cost per unit with the time taken (FORMOCC) and four other variables taken into consideration. This test used three dummy variables: Third Malaysia Plan (3MPLAN), the National Housing Department (NHD) and the state of Penang (PENANG). The result of this

analysis shows high association between project cost per unit (CO\$TUNIT) and a series of variables: the time taken for project completion (FORMOCC), (3MPLAN), agency (NHD), states (PENANG) and the resourcing stage (RECOSING). The t-value produced significant t for three variables: the FORMOCC, 3MPLAN and PENANG but not with the resourcing stage (RECOSING).

Table 10.30:

RELATIONSHIPS BETWEEN PROJECT COST PER UNIT IN NOMINAL PRICE
AND PERFORMANCE BY TIME TAKEN (FORMOCC)

Dependent Variable: Total Project Cost Per Unit (CO\$TUNIT)

Multiple R	.70501	Analysis of Variance	D.F.	S.S.	F-Value
R Square	.49703	Regression	5	4090207059	31.03
Adjusted R Square	.48102				
Standard Error	5134.50179	Residual	157	4139008054	Significant of F .0000
Variable	B	Beta	Standard Error	T	Significant of T
FORMOCC	51.609657	.238159	13.028161	3.961	.0001
3MPLAN	-8389.50509	-.590088	811.397762	-10.340	.0000
PENANG	6382.12505	.267426	1405.87007	4.540	.0458
NHD	-1236.64880	-.080260	907.429960	-1.363	.0000
RECOSING	58.900255	36.236910	.095634	1.625	.1061
Constant	15362.1868		1267.3326	12.122	.0000

Source: Researcher's First Stage/Quantitative Data Collection

Another test examined relationships of completion time and adjusted cost per unit based on 1990's price was carried out as in Table 10.31. Five other variables (3MPLAN, NHD, PENANG RESOCING and LOANSECR) were introduced into this analysis. The test result in this Table 10.31 has an improved correlation value than in Table 10.29. The correlation value of multiple-R increased to 0.61 and with R-square of 0.37. This interpreted as a modest relationship between adjusted cost per unit in 1990's price with dependent variables in which 37% of the regression line is explained. Three variables produced significant t values while NHD and RESOCING produced value of larger than 0.1.

Table 10.31:

RELATIONSHIPS BETWEEN PROJECT COST PER UNIT (ADJUSTED IN 1990'S PRICE) AND PERFORMANCE BY TIME TAKEN (FORMOCC)

Dependent Variable: Project Cost Per Unit Adjusted in 1990's Price (ADJ\$UNIT)

Multiple R	.61186	Analysis of Variance	D.F.	S.S.	F-Value
R Square	.37438	Regression	6	2765951813	15.55848
Adjusted R Square	.35031				
Standard Error	5443.30994	Residual	156	4622221206	Significant of F .0000
Variable	B	Beta	Standard Error	T	Sig. of T
FORMOCC	-26.773652	-.130393	18.129247	-1.477	.1417
3MPLAN	-6323.067096	-.469374	862.103166	-7.334	.0000
PENANG	6357.424674	.280956	1490.764335	4.265	.0000
NHD	-1198.553143	-.082095	965.451452	-1.241	.2163
RESOCING	-6.951366	-.011912	42.446099	-.164	.8701
LOANSECR	95.798136	.328434	27.812376	3.444	.0007
Constant	18594.777057		1360.444917	13.668	.0000

Source: Researcher's First Stage/Quantitative Data Collection

In this analysis, there are two issues identified in relation to cost and time taken: (a) delays in project implementation, especially at the planning stage, caused longer time to complete projects, involved with increased nominal project costs; (b) delays which arise of inadequate project preparation made, meant that extra costs were incurred - so real cost rose.

The following Table 10.32 shows that there were differences between the total project cost (in 1990's price) for projects completed by quartiles. Lower costs were shown for projects spent shorter planning stage, shorter beginning of construction and shorter completion time. For example, project completed below the first quartile with average cost of \$17,316 compare with \$19,170 for projects completed in the third quartile where about 10% increase had occurred. This implied that real price increased when delays in project completion.

Table 10.32:

**COMPARISON OF TOTAL PROJECT COSTS (IN 1990'S PRICE) BY QUARTILE
OF TIME TAKEN AT PLANNING, BEGINNING OF CONSTRUCTION AND
COMPLETION STAGES**

Quartile of Completion	Mean PLANQTL	Mean FORMBQTL	Mean FORMCQTL
Below First Quartile	\$17,494 <i>\$6,133</i>	\$17,315 <i>\$8,139</i>	\$17,316 <i>\$8,139</i>
First Quartile	\$17,299 <i>\$7,428</i>	\$19,015 <i>\$7,487</i>	\$18,885 <i>\$7,448</i>
Second Quartile	\$18,549 <i>\$7,099</i>	\$18,736 <i>\$5,841</i>	\$18,736 <i>\$5,871</i>
Third Quartile	\$20,725 <i>\$5,736</i>	\$19,207 <i>\$5,189</i>	\$19,170 <i>\$5,189</i>
Total mean	\$18,531	\$18,531	\$18,531
standard deviation	<i>\$6,713</i>	<i>\$6,747</i>	<i>\$6,733</i>

note: figures in italic are for standard deviations

Source: Researcher's First Stage/Quantitative Data Collection

Table 10.33 below shows results analysis of variance test with the significant difference in real cost according to quartile for the planning stage, beginning of construction and completion time. This test confirms that clear projects spent shorter completion time and had lower real costs. This is more significant for projects spent shorter time to begin construction with the lowest significant of F of .003.

Table 10.33:

ANALYSIS OF VARIANCE OF TOTAL PROJECT COSTS (IN 1990'S PRICE) BY
TIME TAKEN AT PLANNING, BEGINNING OF CONSTRUCTION AND
COMPLETION STAGES.

(Based on 166 Completed Cases)

Dependent Variable: Total Project Cost in 1990's Price (Per Unit) ADJ\$UNIT

Source of Variation	Sum of Squares	D.F.	Mean Square	F-value	Significant of F
Main Effects	962396377		106932930	2.548	.009
PLANQTR	315679739	9	105226579	2.508	.061
FOBEQTL	595670953	3	198556984	4.732	.003
FORMOCTL	187215805	3	62405268	1.487	.220
Explained	962396377	9	106932930	2.548	.009
Residual	6504116284	155	41962040		
Total	7466512661	164	45527516		

Source: Researcher's First Stage/Quantitative Data Collection

Some Interpretations on the Quantitative Test

In statement 1, it was confirmed that there was variation in the funds provided to the housing programme by the five-year plans and states. The amount of funds allocated to projects was used to measure this statement. In this analysis it was shown that the amount funds increased from 3MP to 5MP and that higher amounts were allocated to projects completed outside the intended plan. This implies that higher funding was required for projects taking longer time to complete.

In the statement 2 the researcher compared between the amount of project funding and the project cost. It was highlighted that lower funding was provided than the total project cost. This was because the allocation of funds and loan were approved earlier, while delays in project implementation meant it took longer to complete the projects. As a result, the allocation of funds and amount of loan approved were not anymore valid to cover construction cost. Similarly, the estimate of project cost was also lower than the total project cost. Inadequate funding occurred because costs

increased: (a) because of delays and inflation, (b) because extra resources were needed to complete projects once they had been carried in detail following inadequately detailed initial price.

Statement 3 examined the relationship between utilisation of revolving funds and project performance in terms of the amount of the project cost and the time taken to project completion. Revolving funds were created by the government to advance payment for projects with the expectation of speeding up the implementation and reducing the cost. The comparison between projects which utilised and which did not utilised this fund showed that projects which did utilised the funds cost more and took longer time. Thus, the revolving funds was not an effective arrangement in reducing the cost or expediting project implementation. However, these projects might have been worst, without using the revolving funds.

In the statement 4 this researcher examined the association between the time taken to complete the project and the total project cost. The test by multiple regression showed that there was a linear relationship between the time taken and the total project cost however the association between the two was weak.

QUALITATIVE ANALYSIS ON PROJECT FUNDING AND RESOURCING

This part of analysis discussed programme funding and resourcing from the qualitative data set.

Allocation of Funds

The process involved in the allocation of funds was lengthy and underwent several stages; starting from the request by SHD, then through several central agencies including the MHLG, EPU and Treasury. Annual budget allocations were made through the MHLG to enable provision of loans for the projects.

Projects' allocation of funds were usually granted to states at the beginning of the five-year plan based upon average estimate of project cost per house for each of the plan. Allocation of funds to each state was made on criteria such as: the states' past trends in implementing this programme, their willingness to implement these projects, and the availability of land for the proposed projects. Then, during five-year plans' mid-term review additional projects and funds were considered for the states.

Funds were allocated for each project formulated in the five year plans. However, they were sometimes inadequate to meet to total project cost. This occurred because estimates were made at the beginning of the five year plan, without taking into the consideration cost increases during construction which was taking place several years later. However, annual budget allocations were under-utilised by state governments, where the amount of loan withdrawn every year was less than the amount of funds allocated.

The federal government set a project cost limit funded from the loan money of M\$7,500 per house during the 3MP, then to M\$14,000 in the 4MP and finally to M\$25,000 during 5MP. The cases analysed in Chapter 9, showed that the state governments had to provide additional funding meeting higher project costs. In 1982, the government approved the maximum selling price for low cost houses of not more than M\$25,000. However, the policy of the federal government in allocating funds for the low cost housing projects was still at M\$14,000 per house. One of the respondents at the implementing agencies commented, *"...in the situation where basic construction criteria were fulfilled and the project did not face any difficulty then it would possible to build within the cost limit. But several projects were facing problems where this cost limit had constrained the project implementation."*

Loan Approval

As mentioned above, the policy on project cost limits constrained the programme. This was because the average cost per house was higher than the cost limit. As a result, many projects requested additional loans. In relation to this, one respondent described as *"over controlled but short-sighted of the problems on the ground"* ⁽⁹⁾ Another respondent who is a programme administrator at the implementing agency pointed out, *"all problems include tailoring to the cost limit set by the amount of loan approved for a project is passed to the implementing agency to solve it."* This problem had occurred over several plans, as a respondent pointed out *"...the similar problem had also occurred during the past five year plans projects, it was of course, the loan provided by the federal government was lower than the actual total project cost, because of there was an understanding that a certain amount of cost had to be provided by the state government. Also certain project components were to be borne by the state government, such as the land and infrastructure costs."*

On the other hand, respondents from central agencies saw state governments as apathetic to this programme. They saw this demonstrated by the large number of initial planning problems, such as site selection, squatters problems, changes in project scope and priority and weak command of departments under state control. The Ministry found it difficult to persuade the state government to take loans which had to be repaid to the federal government.

'Ras', a programme administrator at the Ministry, whose responsibility was monitoring project progress and liaison with state governments pointed out that:-

"The State governments feel very sensitive when federal Treasury imposed that before fund could be withdrawn they have to verify the project's progress through making visits. To state governments this indicate as 'distrust' feeling of the federal government and senses as over control. This was because the fund was provided in form of 'loan'; whatever happen, the state has to pay back. Therefore the states should be given a more freedom like in the pasts. Although in the past plans federal agencies had made visits, but they were not the prime emphasis when to make payment for loan withdrawals. It was adequate just by certification of the superintending officer [project's engineer] in charge of the project. In fact in the past there were many projects where 'advance payments' made by the federal Treasury. Certain amount of the loan can be withdrawn while waiting for the agreements between the two government being formalised."

Examples were quoted from several projects where loans were disbursed even before agreements were signed (e.g. Trunkville). The justification was that tenders were called even before loan approval was granted by the TCOHL at the MHLG. That was why the Committee made the statement in 1982 that they were very upset with this practice and warned states not to call for tenders before loans were approved by the committee.

Project Cost

The central agencies were inclined to approve lower funding than requested. As a consequence, projects faced difficulties because of higher construction costs and inadequate funds. Additional loans had to be requested from federal government or the states had to bear the costs from their own funds.

The amount of loan provided was adequate if projects immediately proceeded to the construction stage. Delays in construction made the loan provided inadequate to cover the project cost. Accurate estimates and proper project preparation is important to fit within the constraint set by the programme. The Federal government controlled the amount of loan for the programme and the states therefore had to build houses conforming to the amount approved. Hence, states ran the risk of having to provide additional funds if the loans provided were inadequate.

Revolving Funds

Eight out of 24 projects studied under the qualitative data analysis utilised the revolving funds. These projects consisted of 5 slow projects, 2 average projects and one uncompleted projects. However, delays in implementation of the uncompleted and the slow projects were not the result of financial problems. The slow projects were faced with problems at the preparation and planning stage, such as delays in site selection. The uncompleted project was because of the incapability of the building contractor. Two respondents, Kas and Chali were of the opinion that revolving funds were useful in project financing, because they can be used as advance payments while waiting loan withdrawals form the Treasury. Chali explained that *"...project financing should not be a problem. ..the state can make payment in advance from this with a 'revolving fund' while waiting for loan withdrawals from federal which were usually delays."*

Summary on Project Resourcing

Problem about funding and resourcing arose because of the following:-

- Firstly, the imposition of a "top-down" perspective in programme resourcing where there was project cost limit set by the federal government which determined the amount of loan approved and the maximum selling price imposed the low-cost housing. Violation of the cost limit by a higher project cost than the permitted selling price, resulted in the states bearing the differences from their own funding.
- Secondly, the federal agencies were inclined to approved lower loans than the amount requested. Based on the cases analysed, difficulty arose a result.

- Thirdly, inadequate funding was the result of delays in completing the planning stage, which caused delays in starting project construction. Delays in starting of project construction resulted in the increased of project cost (because of inflation and revision to schemes requiring more expenditure). The amount of loan approved for projects became inadequate because cost escalation.
- Finally, the provision of PLCHP funding in the form of loans was considered “discouraging and burdening” when comparing with other grant allocations. Project financing in the form of loans was considered difficult because of the lengthy procedures involved besides “the hassle to collect payments from buyers.” In addition, the loan withdrawal process became more difficult because of added steps and stricter procedures imposed by the federal Treasury on loan withdrawals by states.

Overall the main theme involved in this resourcing stage is that a lengthy process, tighter procedures and inadequate funding provided by the federal government affected the implementation of the programme.

Decision on Hypothesis Two

Findings from the quantitative and qualitative data showed there were variations of funds allocation by five-year plans and states. The programme experienced inadequate funding because project costs were higher than the funding provided by the federal government. Inadequate funding occurred because delays in project implementation led to cost increases.

SECTION THREE: INTERACTION BETWEEN AGENCIES AND ACTORS AT THE BOTTOM

Introduction

This hypothesis looking into the question of interaction between agencies and actors at the bottom of the implementation process. Implementation of public programmes, especially those initiated from the federal level, involve various levels of government, multiple agencies or public and private sector arrangements. At the

bottom, programme implementation usually faces the problem of inter-agency relationships and intra-agency problems which affect the programme outcome. Many scholars view inter-agency problems as crucial to the programme implementation. This problem can be conceptualised as "...a problem of co-operation and possibly co-ordination" (O'Toole, 1995; p.45) or "assembly process in the hands of many" (Bardach, 1977). Similarly intra-organisational problems are acute in the programme implementation. Intra-organisational problems are control problems in the bureaucracy. In addition to the inter-organisational and intra-organisational problems, changing implementation climate and the interference by several other key players also affect programme performance. In PLCHP the array of players in the implementation process is large and diverse, including not only actors in the agencies but also politicians, contractors or even land owners and squatters whose livelihood are affected by the proposed schemes.

Respondents View

Many respondents believed that delays and problems with the implementation of this programme were associated with the interaction of inter-agency relationships and actors related to the programme. The scenario in Malaysian bureaucracy is the practise of consulting others. The reason is because each department has its own territory or 'domain of responsibility'. Also other departments hold information, resources or expertise. The practise of consultation is also an attempt at co-ordination, co-operation and to avoid being blamed for policy failure or problems. Respondents also pointed out that problems occurred because of political interference during site selection and occupant selection. This is because of the difference in opinion between administrator and politician; administrators are guided by the procedures and time and cost constraint whereas politicians are concerned with who is affected by the programme and whether this brings support.

Official Capacity and Official Relationship

Implementing public programmes has the advantage of better contact and accessibility with other government departments through formal channels and agendas. Programme administrators at the state level or implementing agencies can meet and negotiate in an official capacity. There are many agendas where administrators can voice their requests through several meetings at the district, state or

ministry level. ⁽¹⁰⁾ In general the acceptance of this programme by other departments is good, because of the tradition of giving priority to government programmes.

Respondents mentioned that the changing treatment of this programme has created problems in respect of increased time and cost. In the past, especially during 3MP, technical departments and local authorities were given priorities and relaxation to project specifications for the programme. But as time progressed, especially at the beginning of late 4MP and early 5MP, these departments began to impose many requirements. Some local authorities insisted that planning permission must first be obtained. Other government departments and local authorities seemed to have forgotten about the objective and philosophy of this low cost housing programme which they viewed simply in terms of imposing their own technical inputs and requirements, and imposed conformity with planning standards. Interpreting feedback from respondents, this problem can be summarised as follows:-

- Change in the policy stance of local authorities to the programme implemented by the states, when in the past, there had been more relaxation.
- Increased standards, imposed by technical departments and local authorities which affected project costing. Difficulty arose when these requirements were imposed during project construction or after the completion of construction when certificates of fitness were required.
- Requirement to conform to standards set by technical departments and local authorities.
- The changing inter-agency climate in the implementation of public programmes, where similar treatment was given to the public and private sector programmes and where priority has been given to the privatisation projects.
- Some of the implementation components were dependent on other agencies' input or their setting of priorities.

This issue of interaction is clustered into the intervention of non-agency actors and the intervention of inter-agency actors. The non-agency actors consist of politicians contractors, land owners and squatters. The inter-agency actors are further clustered out the following categories: (a) interaction with other agencies in general; (b)

interaction with implementing agencies; (c) interaction with technical departments; (d) interaction with local authorities; and (e) interaction with agencies providing service, resources or utilities. In the PLCHP interaction of actors and agencies affected the programme by increasing implementation time and therefore project cost.

Actors Outside the Agency

Actors outside the agency are councillors, politicians, contractors, land owners and squatters. They may also intervene and deflect the project's implementation process, resulting in increased time and cost. Data analysis at the scheme level suggested that councillors and politicians are interested in the selection process; both the selection of sites and selection of occupants for the projects. Land owners and squatters affected this programme because projects were proposed on land that affected their livelihood. Therefore, land owners and squatters caused resistance and confronted the agency or authority through their connection with politicians or councillors. Councillors and politicians took the squatters and land owners' side to gain votes and "political mileage".

Politicians

Councillors and politicians may play the role of assisting the agency or otherwise. They did not necessarily provide hurdles to obstruct project implementation. In many instances, they assisted the agency in dealing with and solving problems on the ground, acted as middlemen, or pushed the agency to expedite project implementation. But, their involvement was especially pronounced if opportunities existed of getting votes or support, otherwise they would protect themselves from "getting their feet muddy".⁽¹¹⁾ Generally, councillors and politicians, from the perspective of programme administrators, can be summed as having difficulties in coming to agreement among themselves, especially in occupant selection, and this is one of the factors affecting the programme performance.

Site Selection

Examples from several schemes show that project implementation were affected by the involvement of councillors and politicians. For example, the *Muddy Canal project*, where local politicians interfered and requesting the project to be located at another site. In this project, the state was depended for a decision by the

state legislative councillor for that constituency, of whether to proceed with this project or otherwise. Even the interference of the Deputy Minister of Housing was unable to reduce local politicians' interference on this issue of site selection. Site selection for this project was finally made in early 1993 by another state legislative councillor, who was appointed in 1990. In another example, the Black River 3 project, squatters strongly resisted this scheme through their state councillor, which led to project cancellation. In the *Trunkville project*, squatters refused to move from the proposed site and protested their eviction through their state councillor. This caused delays to site selection and a lower number of houses were built, in partly accommodating the squatters on the proposed project's site. Political interference at the scheme level caused difficulty in site selection. The SHD was unable to convince politicians on this matter, because of the wrong choice of the site itself and the states indecisiveness about the project. ⁽¹²⁾

Occupant Selection

Occupant selection is another area involving politicians. State councillors were appointed as members of the selection committees. Although, there were guidelines on occupant selection made by the state, these did not solve the problem, because politicians usually had difficulty in coming to an agreement on whom to choose and they always had their own interpretations. For example, in the *Risefield project*, selection of occupants was made the state councillor himself neglecting the committee headed by the district officer. This caused conflict and friction between the politician and the district officer. The *Stony River project* is another example, where a state councillor believed he was the authority for selection.

The examples cited above show that programme implementation was affected by outsiders to the agency: councillors and politicians. Their approach is usually vocal, whether pushing or giving resistance to public agencies. However, an emerging question arises, why agencies and politicians at the bottom are capable of co-operating among themselves when there is "top political figure" behind a project? Can this suggest that programme implementation needs strong leadership or strong backing from an influential leader?

Contractors

The capability of contractors also has significance to projects' performances. This was demonstrated in several schemes such as the Broken Mound, Bamboo

Splinter, Risefield, Gingling and Blind Pheasant projects. For example, the Broken Mound project was abandoned halfway by the contractor and was finally cancelled. In the case of Bamboo Splinter project, the implementing agency blamed to contractor for being unable to distinguish the site's proper boundaries and that lead the state to cancel this project. Three other projects (Risefield, Gingling, Blind Pheasant) experienced delays and problem because of the problems faced by contractors. In contrast, fast projects (Barkings, Knee Lie, Manor) were built by capable contractors who had a good performance record with the NHD. While two other projects, Lumber Junction and Long Sand, were built by "experienced and capable contractors".

Example of Inter-Agency Relationship at the Scheme Level

The problem of obtaining the certificate of fitness for *Ficuswood scheme* is an example of inter-action between actors and agencies at the bottom. The delay in completing this project was raised in the State Action Committee meeting. It was informed that problems had occurred as a result of delays in removing illegal squatters on the site, where a feeder road to the scheme was proposed. After that, a visit to the site by Chief Minister, representatives of government agencies and the local UMNO (a ruling political party component) committee was made in early 1991. The implementing agency informed them there were 71 squatters families needing to be resettled to temporary "long houses".⁽¹³⁾ Unfortunately, these squatters were not allocated the temporary "long houses" because the state was still undecided about accepting the grant money (about \$1 million) from the EPU for squatter resettlement in the Klang Valley.⁽¹⁴⁾ Instead, the UMNO committee proposed that the squatters move to another of the SEDC's own project elsewhere. SEDC refused to comply with this proposal because it already had 13,000 applicants to cater for. The project was completed in June 1991. Then, every month of the State's Housing Committee Meeting, the agency requested that the squatter problem be solved by the State's Housing Division and the District and Land Office. The implementing agency also requested the local authority to issue a temporary certificate of fitness for occupation, while waiting for this problem to be solved by the District and Land Office. Finally, a meeting was held to solve this problem when the District and Land Office promised to solve the squatters problem immediately, the district council promised to issue a temporary certificate of fitness and the state councillor for the constituency pledged to provide a list of selected occupants. The programme administrator at the implementing agency's level voiced her dissatisfaction, because the selection of occupants took three years and was completed only in April 1994. After resettling the

squatters temporarily elsewhere, the implementing agency constructed a feeder road to the scheme and the project was completed in November 1994. Then, an additional requirement to provide soft landscaping was imposed by the local authority. While recognising the importance of providing landscape for the scheme to comply with the newly formulated by-laws, the programme administrator appealed to the local authority to grant an exemption because expediting occupation of the houses was more important in fulfilling the national housing objective, besides being constrained by cost limitations. Unable to obtain exemption, the implementing agency had to comply with this requirement. A waste of time occurred, because the implementing agency had to consult and obtain agreement of the State's Housing Division because of additional cost incurred. Having complied with this requirement, the said certificate of fitness of occupation was not obtained because a personnel in-charge of the issuing of certificate refused to obey directives from a superior officer.

Relationship Between Central Agencies and the States

Federal officers perceived programme implementation from the top down perspective characterised by the goal oriented approach of reaching the target by the end of the plan within cost limitations. Programme administrators at the federal level were of the opinion that the programme should have not faced many inter-agency problems because they viewed it as "implementing government projects"⁽¹⁵⁾ "carrying out the state governments' own projects"⁽¹⁶⁾ or "fulfilling constitutional responsibility on housing"⁽¹⁷⁾. This assumption was based on "...the tradition of giving priority to government projects, where projects sometimes may be constructed first and approvals can be obtained later from planning authorities."⁽¹⁸⁾ Implementation and control of the programme was carried out by monitoring through reporting systems, visits to the states, meetings and persuasion. The following description illustrates this point.

“The way we dealt with this programme was through several means, such as monitoring the progress reports, the quarterly meetings, the quarterly meetings, special meetings and in other forums. In the first place, the states had to submit to the Ministry the monthly report on the physical and monetary progress. We also checked the projects’ progress through ‘SETIA’⁽¹⁹⁾ and ‘SIAP’ reporting system. SETIA provided physical progress and expenditure report. We also had regular quarterly meetings with the state governments. From these we had the feedback enabling us pushing the states to accelerate their performance. Also, don't forget that through the technical committee on housing loan we can exert pressure. We can ask the state governments to improve their performance before approving new loan applications.

Sometimes we presented states’ housing performance in other forums like the National Housing Council, where EXCOs on housing from each states attended. When this meeting involved the EXCO on housing it would provided an added pressure in the state. So by this, we had the administrators and politicians’ level to attend on this low-cost housing projects’ problem.

Apart from meetings the MHLG also used to make regular visits. Pressurising the states sometimes may not help, so we have to develop a good relationship. This was because the state is another entity that we can not just give directives. Through this good relationship and we have to play a proper public relation roles. Usually things worked through this good relationship. We visited the states, talked to them, see the projects, helped them and sometimes we talked nicely to them “please work harder!” I think in the absence of other means these approaches were quite effective.”
[Halo, 23.11.1994]

Inter-agency Relationship at the Bottom

Programme administrators at the federal level assumed relationships between agencies and other actors at the local level were going very well. They thought that the programme was given a priority and treated with urgency. However inter-agency relationships become more complex with a changing environment. Today,

government projects are treated similarly to private sector projects. Several respondents believed that the spirit of providing inter-agency co-operation had fallen.

Prior to 4MP the programme was considered as the state governments' projects, and was not subject to any planning approval from local authorities. Standards and specifications for housing projects under this programme were determined by the implementing agency.

The culture of inter-agency consultation, involved agendas and attempt to co-ordinate. This was the arena where problems with technical departments were solved during interagency meetings and special meetings chaired by the Chief Minister. This 'prominent figure' acted as a factor expediting project implementation and as a middleman to moderate differences between agencies, if they arose.

Similarly inter-agency relationships in certain arenas helped to expedite the implementation process. When certain leaders emphasised the importance of the low cost the programme, programme implementation worked efficiently and smoothly. These people bonded together with close relationships due to certain similarities and common interests. They can act as agents expediting the approval process or providing services and utilities. However, new questions may arise of how to ensure good relationships between agencies without the existence of these bonds? One respondent questioned: if they unable to have a mechanism to speed up the implementation process, it defeated the purpose of government itself building the project, some 'co-operation' between government agencies was intended to speed up the project implementation.

INTERACTION WITH IMPLEMENTING AGENCIES

Acceptance by the state

Programme implementation also involves interaction between the state and its implementing agencies.

In Perak for example, during 3MP, the reception by the state to the technical services offered by the federal government through the engagement of NHD was very encouraging. Almost all housing projects were implemented by the National Housing Department. Before 3MP, the state used the service provided by PWD and SEDC. Since these two agencies, PWD and SEDC, had many projects of their own, the

assistance offered from the newly formed NHD was more than welcomed by the state then.

In contrast, Selangor favoured the use of SEDC and PWD in the implementation of its own project. In Selangor, a larger number of projects were given to the SEDC and PWD. Whereas, Negeri Sembilan felt more comfortable to engaged it own SEDC than NHD or PWD for project because they were more experienced and knowledgeable about local conditions.

Interaction With Technical Departments

Specifications and standards were referred to other technical departments at the state and districts level. A range of departments such as Town and Country Planning Department, Public Works Department, Health Department, Fire Department and Drainage and Irrigation Department. The roles of these departments in the programme were: giving comment and applying sanctions as well setting the standards to be followed by projects. Reference to these departments were the result of statutory requirements or administrative arrangements.

Project implementation progressed smoothly if co-operation amongst agencies was encouraging as evidenced in the Lakesland projects. However, occurrence of delay in the construction progress and increase in cost is found in the *Coralville project*. When the plan for Coralville project was referred to the Health Department, sewage treatment was imposed by group septic tanks. However, when federal health standards changed an oxidation pond was required. This caused an increase in cost to the project. Redrawing the detailed plan and negotiating construction work with the contractor caused additional time.

Interaction With Local Authorities

The Stand Adopted by Local Authorities

During 3MP the programme was considered as a government project and was not subjected to any planning permission from the local authorities. However, at the beginning of 4MP some local authorities required planning permission to be obtained first, before any project construction. In the past, projects carried out by the Public Works Department were not referred to any local authority or to other technical departments. This is because, traditionally, the Public Works Department is the

agency implementing government projects and standards are set by the department itself.

Problem arose because projects did not conform to standards imposed by the local authorities. When the number of completed projects increased, they lead to increased responsibility for maintenance and services of these projects by the local authorities. The local authorities were reluctant to provide services to these project areas, unless planning approval was first obtained.

Planning Requirements

Administratively state governments may direct local authorities to issue certificates of fitness for projects. But this may create legal problem because the local authority is an autonomous body and the state government is not in the position to issue specific directives. Several attempts were made, but failed in negotiating with local authorities to grant more relaxed planning standards and to issue certificates of fitness for projects under the PLCHP. This created friction between officers working at the local authorities and at the state secretariat. Finally, many states decided to conform to the standards imposed by local authorities in order to obtain certificates of fitness and also to avoid further friction between themselves and the local authorities. When plans were submitted, the local authorities insisted the projects to be upgraded with additional facilities.

Increased Standards

Special considerations were given to planning standards when approving plans for low cost houses. Low cost houses are constrained by cost limits. If the requirements are too stringent this can result on cost increases. As a result, the programme is burdened with costs. Delays in approvals can also cause cost increase, because the loan approved was not valid anymore during the call of tender.⁽²⁰⁾

Interaction With Services, Resources and Utility Agencies

These agencies interrupted projects by imposing new standards and requirements on the projects. In coping with these, several actions had to be taken such as re-drawing some project's detailed designs, amending contract agreements, calculating new costs, fulfilling certain procedures and seeking additional loans if the funding was inadequate.

Power Supply

Several projects experienced increased of cost and delays because imposition of additional standards about power supply. Examples at the scheme level can be illustrated from projects such as the Swampy Village, Whiteville and Stony River.

In the case of **Swampy Village** project, when it was completed in 1982, electricity supply could not be provided because the utility agency required an electricity power sub-station to be built, although the previous understanding it was not required. Another case the **Whiteville project** where a strong resentment by utility agency; the agency felt it must be consulted and it's consent must be obtained when dealing with matters related to its area of jurisdiction or area of its specialisation. However, what was wanted by the utility agency was not clear. This case highlighted that problems might occur if parties involved were not consulted and especially when the party could impose certain restrictions. Finally in the case of **Stony River** project, deflection occurred from practise, besides the imposed payment of contribution fees of M\$238,000 where the utility agency required that the land title must first be issued. It quite unusual for the utility agency to impose this condition because it was not the issue within it jurisdiction and should not the question at all.

Water Supply

The pace of this department dictated project completion. An example come from the **Trunkville project** where construction faced problem because of delays as the result of waiting for the plan amendments by the implementing agency to be agreed by the Water Supply Department, SHD and other technical agencies. Then, while constructing the project the Water Supply Department requested the water supply pipe for this project to be amended from a 200 mm to a 300 mm type. This type of change required amendments to the contract, which usually significantly increased the cost and required an extension of the construction period. In another project (**Muddy Canal**), the Water Supply Department insisted the water tank be built of concrete pillars, whereas in the past the department had always allowed steel pillars. This caused an increase in total project cost of M\$33,000 per house from merely M\$25,000 per house. For a small scale housing project such as this, the cost to build the required water tank made a significant increase to the total project costs.

Land and District Office

Land and District Offices play important roles in this programme in connection with project proposals, site selection, land matters, enforcement and squatter eviction, and occupant selection. Actions by these offices can affect the time

and cost of project. For example, the Golden Hope project, its land acquisition: was gazetted as 50 acres instead of only 20 acres intended. Amendment to the said gazette notification involved legal procedures which affected additional time concerned and payment of damages to land owners. Inability of the Land Office to evict squatters was the amongst the major reasons for project cancellation in Black River, Trunkville, Splinter Bamboo projects. In contrast, the ability of Land Office to effectively solved squatter problem in the Stony River project caused smooth implementation of the project.

Intra-Agency Relationship

Intra-agency problem is a control problem in bureaucracy. Problems occurred because lower level personnel were not taking action, as directed by higher level personnel. This caused delays in issuing approvals or certificates of fitness. As one respondent mentioned *"...after all these works have to be done those lower level personnel, they can make the files move faster or slower."*²¹ Even within the organisation an issue was raised of how to co-ordinate the combination of works amongst planners, architects, civil and structural engineers so as to comply with the cost limit of maximum M\$25,000 per house.

Continuity of Personnel

Lack of continuity of personnel at all levels of agencies involved in this programme also affected programme performance. In the Malaysian bureaucratic system, personnel are on transfer from one agency and one level of government to another. In general a range of personnel involved in the implementation of the programme were subject to this kind of transfer, with the exception personnel at the SEDCs. While this approach has advantages, this effected the implementation of the programme. For example, a new person has to learn about *"all the nodes and the trade about the implementation of this programme"* ⁽²²⁾ but when the personnel have attained experience and learned the trade of public policy implementation, he is then transferred to another agency. If programme implementation is considered as a learning process, then the learning was not carried through to the next plan. Amongst other reasons, this is a plausible explanation of the programme poor performance, where a series of similar problem repeatedly occurred in the programme implementation.

Interpretation and Conclusion

In the section three of this chapter this researcher has analysed and attempted to test the hypothesis about interaction between agencies and actors at the bottom responding to the top-down policy set by the federal government. Interaction amongst agencies and politicians affected the implementation of the programme and eventually affected the programme performance in terms of achieving its pre-determined target. This interaction caused deflections, hurdles and to an extent uncertainty about many decisions, especially during the early implementation stage. Inter-organisational relationships in programme implementation that involved the interaction between two or more units on behalf of a public policy, can be conceptualised as problem of co-operation and possibly co-ordination. Broad reasons why inter-agency interaction was more difficult arose because of: (a.) agencies imposed their own requirements, own views and perspectives on the programme implementation, (b.) agencies imposing sanctions and requiring proper consultation (c.) the changing of bureaucratic climate and stance toward government programmes in general.

Facing with difficulties and problems at the bottom, then the question is how to improve programme success by striking the balance between: (a.) reducing the effect and constraints created by actors and agencies; (b.) complying with the cost limit, and; (c.) meeting the time frame and targeted number of houses as intended early in the five-year plan.

SECTION FOUR: DECISIONS ON THE HYPOTHESES

This last section presents a summary of findings and the decisions on the hypotheses analysed in this chapter. The first hypothesis is testing the relationship of the programme's preparation and planning stage with the programme performance in terms of the time taken to complete the project implementation. The main findings from this hypothesis testing are as follows:-

1. There is relationship between project preparation and performance in terms of the completion time, whether within the same plan or intended plan; under or more than five years; and, completion time by quartiles. However, the association

between project preparation and shorter completion time is only partially supported.

2. The project planning stage has a substantial association with the time taken from the formulation until the starting of construction, the completion of building and the occupation of houses.
3. There was a substantial positive association between the project's planning stage and the project's completion time. This relationship was linear; when the time taken at the planning stage increased then the total time to complete the project would be longer.
4. The length of time spent on the whole implementation process was varied significantly between states. The result of the ANOVA test confirmed that variability occurred between the time taken in the implementation process and the plan, states and implementing agencies jointly together.
5. The qualitative data analysis confirmed that the performance of this programme was affected by delays in the project implementation because of inadequate preparation for project proposal, inadequate planning and projects not working as planned. Although the implementation of this programme has undergone several five-year plans, it is still experiencing an unsatisfactory performance and little improvement.
6. The programme performance was associated with the problems occurred during the project preparation and planning stage. These problems include unclear guidelines, rushing to meet the deadlines, unidentified project site, inappropriate and indecisiveness about site selection, difficulty in getting state land and the proposed site occupied by squatters. When projects were proposed to the states and central agencies, a large number of their sites was not identified. Sites were only identified after they were approved for the particular five year plan. Proper feasibility studies were also not carried out in many of these projects.
7. Selection of project site has become more difficult because the state land became scarce, whereas private land became more expensive. Moreover, rapid development in some areas has caused greater competition in getting land for the public low cost housing projects.

Evidences from qualitative, and quantitative data proved that the programme's preparation and planning stage has significant towards the overall completion time. In the quantitative analysis, the correlation tests between the planning stage and other subsequent stages produced significant results although the examination on the preparation variables produced weak results. In the qualitative data analysis noting the pattern that the project preparation and planning stage produced plausible relationships with other stages, the project completion time and the programme performance directly.

Funding and Resourcing

The second hypothesis is on project funding and resourcing where it was predicted that the performance of the public low-cost programme is dependent on the allocation of resources devoted to it. Delays in implementing the projects caused cost increases which were affected also by inflation and as a result the states had to meet some of the project costs from their own funding. Data analysis on this hypothesis produced findings as follows:-

1. The allocation of funds varied between plans. It showed an increasing pattern on the amount of the average allocation per unit from the 3MP to 5MP.
2. Several significant differences were evidenced in terms of project funding and resourcing of this programme. There were differences on the amount of funding between the projects completed within the same plan and projects completed outside the intended plan . Projects completed outside the intended plan cost more than those completed within the same plan. Projects were provided with inadequate funding where the amount of funds allocated and the amount of loan approved were lower than construction tender price and total project cost per unit. As a result, the state governments had to bear the shortage between the total cost and the funding provided by the federal government.
3. The amount of loan requested for this programme was higher while the loan approved was lower. However, this project cost estimate was still lower than the cost of construction tender and total project cost. This occurred because there was a lapse of time between when the estimate was made and the construction end. The mean of time lapse between this two periods was almost four years. This explained the reason why the project estimate was no longer accurate. Similarly this also explained why the amount of loan provided was not adequate to cover the

project cost and as a result additional loan had to be requested from the federal government.

4. The project cost more as the time progressed from 3MP to 5MP's period. The total project cost per unit was increasing from \$12,342 in 3MP to \$20,353 in 4MP and finally to \$24,291 in 5MP. A similar pattern also occurred when the mean for total project cost per unit is calculated into 1990's price index where \$15,268 in 3MP, \$21,311 in 4MP and \$23,132 in 5MP. In short this implied that the project cost was higher than in the past.
5. Projects cost was higher if the project was not complete within the same plan but were carried over to the next five-year plan where this increase was in the nominal price as well as in real prices (1990's adjusted price).
6. The revolving funds (aimed to expedite project completion and reduce project cost) did not provide an effective result. The analysis showed that projects utilised revolving funds did not perform better in terms of lower project costs or shorter completion times.
7. There was a linear relationship between the mean project cost per unit and the time taken for project completion, although the strength of association between these two variables were considered low. When the total cost was calculated in 1990's price, the result of correlation produced negligible association between these the adjusted cost and the time taken. However when additional variables were included in the multiple regression the relationship became modest.
8. Data analysis in the qualitative part showed how the process involved in getting the allocation of funds for this programme was lengthy. There was delay in approving projects and the allocation of funds by the federal government in the early five year plan, because of the process and procedures involved.
9. In general funds were allocated for each project formulated for the five year plans, however, they were sometimes inadequate to meet to total project cost. This occurred because the estimates were made at the beginning of the five year plan without taking into the consideration the cost increase during construction period which would taking place several years later. In contrast the annual budget allocation was under-utilised by the state governments where the amount of loan withdrawn every year was less than the amount of funds allocated. This occurred

because projects progressed slowly and so the state governments were unable to withdraw project loans.

10. The amount of loan provided by the federal government was lower than the actual total project cost occurred because there was an understanding that a certain amount of the project cost was to be provided by the state governments, such as the land and infrastructure costs. The central agencies were thus inclined to approve lower funding than requested; as a consequence, projects were faced with difficulty because of higher construction cost and inadequate funds. Additional loans had to be requested from the federal government or the states had to bear the cost from their own funds. This became a discouraging factor to the state government.
11. The funding and loan provided would have been adequate if projects had immediately proceeded to the construction stage. Delays in construction made the amount of loan provided no longer adequate to cover project cost. Right estimation and the proper preparation of project is important to fit within the constraints set by this programme. The Federal government controlled amount of loan for the programme. Therefore the states ran the risks of having to find additional funds if the loans provided were inadequate.

Interaction of Agencies and Actors

The third hypothesis related to the interaction between agencies and actors.

Delays and problems with the implementation of this programme was associated with the interaction of inter-agency relationships and actors related to the programme such as the process of consulting others when encroached others' territory or 'domain of responsibility'. Besides other departments hold information, resources or expertise. The practise of consultation is also as an attempt at co-ordination, co-operation and to avoid being blamed for policy failure or problems. Respondents also pointed out that problems occurred because of political interference during site selection and occupant selection. This is because of the difference in opinion between administrator and politician; administrators are guided by the procedures and time and cost constraint whereas politicians are concerned with who is affected by the programme and whether this brings support

The changing treatment of this programme where some local authorities insisted that planning permission must first be obtained while other departments impose many requirements and higher project specifications. Other government

departments and local authorities seemed to have forgotten about the objective and philosophy of this low cost housing programme which they view simply in terms of imposing their technical inputs and requirements, and imposing conformity to planning standards.

Interpreting feedback from respondents, this problem can be categorised as: (a) the change of policy stance by some local authorities to this programme; (b) increased standards imposed cause higher project costing; (c) difficulty in conforming standards after projects have been completed when requiring certificates of fitness; (d) the changing of inter-agency climate in the implementation of public programmes; and (e) some of the implementation components were dependent on other agencies' input or their setting of priorities. In finding the significance of these factors, they were clustered into two: (a) the intervention of non-agency actors, and (b) intervention of inter-agency actors.

The non-agency actors consist of politicians contractors, land owners and squatters where they may intervene and deflect the project's implementation process. This caused delays and increased of cost. Political interference at the scheme level caused delays in site selection and occupant selection. The SHD was weak to convince politicians in this matter because of the wrong choice of the site itself and the state also indecisiveness of about the project. The success and performance of the project is also dependent on the capability of contractor to construct the project. Selection and monitoring of contractor are crucial for project completion within stipulated time and estimated cost.

The inter-agency actors are clustered into: (a) interaction with other agencies in general; (b) interaction with implementing agencies; (c) interaction with technical departments; (d) interaction with local authorities; and (e) interaction with agencies providing service, resources or utilities. Inter-agency relationships at the bottom has become more complex and changing of climate where government projects are treated similarly like the private sector's projects. Several respondents believed that the spirits and roles of providing inter-agency co-operation has been reducing. The basic issue where clearance is to be obtained is the question of lengthy process and increased standards imposed where finally involved increased in cost.

Interaction amongst agencies and politicians affected the implementation of the programme which eventually affect the programme performance in terms of achieving it pre-determined target. This interaction caused deflections, hurdles and to an extent of an uncertainty of many decisions especially during the early

implementation stage. Inter-organisational relationship in programme implementation that involved the interaction between two or more units on behalf of a public policy, can be conceptualised as problem of co-operation and possibly co-ordination.

Faced with difficulties and problems at the bottom then the question is how to improve programme success by striking the balance between: (a.) reducing the effect and constraints created by actors and agencies; (b) complying with the cost limit, and; (c.) meeting the time frame and targeted number of houses as intended early in the five-year plan.

CONCLUSION

In this chapter we have tested and analysed three main hypotheses on programme preparation and planning, funding and resourcing, and interactions amongst agencies and actors at the bottom which affect the programme implementation. This chapter indirectly serves in finding explanations for the phenomenon of target under-achievement and the variable performance of the public low cost housing programme in Malaysia amongst states and periods of implementation.

Important results deriving from this hypotheses testing have major implications on the policies affecting further improvement of the public housing programme in Malaysia in light of the Seventh Malaysia Plan (1996-2000) which has been launched early this year. Although there is a changing policy stance, implementation will be the same. These policy implications may also apply to public policy implementation in general.

The next chapter is the final chapter of this thesis. This final chapter is devoted primarily to linking together an overview of literature and findings of this study. A summary of key findings and lessons learnt from this study are also presented that provide implication and some recommendations to the public low-cost housing programme in Malaysia.

ENDNOTES

¹. The guidelines for interpreting value of gamma as proposed by Davies (1971; p.49) is as the following: 0.00 no association; 0.01- 0.09 negligible association; 0.10 - 0.29 low association; 0.30 - 0.49 moderate association; 0.50 - 0.69 substantial association; 0.70 - 0.99 very strong association; 1.00 perfect association (from Poister 1978; p.456).

². The multiple-regression analysis based on 166 cases (without excluding the outliers of case no.6) is as in the following table. The results produced slightly lower figure than in Table 10.6 in this chapter.

**RELATIONSHIPS BETWEEN THE PLANNING STAGE (PLANSTAG) AND
PERFORMANCE BY LENGTH OF TIME (FORMOCC)**
(Based on 166 Completed Cases)

Dependent Variable: Total Project Completion Time (FORMOCC)

Multiple R	.61322	Analysis of Variance	D.F.	Sum Square	F-Value
R Square	.37604				
Adjusted R Square	.37224	Regression	1	66438.5	98.83887
Standard Error	25.92662	Residual	164	110239.1	Significant of F .0000
Variable	B	Beta	Standard Error	T	Significant of T
Planning Stage	.998331	.613224	.100418	9.942	.0000
Constant	46.19511		4.28863	10.771	.0000
	1				

Source: Researcher's First Stage/Quantitative Data Collection

³ This analysis produced a correlation coefficient of .53 because an outliers was excluded from the analysis. Whereas in the earlier table the multiple R was at .51 when all cases were included.

⁴. Regression analysis between FORMOCC and other variables (PLANSTAG, FORMBEGN and SPAN) produced the results as followed:

(a) FORMOCC and PLANSTAG using all dummy variables for agencies and states:

Multiple-R = .653, R-square = .427, adjust R-square = .386, F-value = 10.45,

F-significant = .0000, PLANSTAG's t-significant value = .0000, but other agency and state variables' t-significant values were not significant at an alpha .05.

(b) **FORMOCC** and **FORMBEGN** using dummy variables for agencies and states:

Multiple-R = .835, R-square = .696, adjust R-square = .675, F-value = 10.45, F-significant = .0000, **FORMBEGN**'s t-significant value = .0000, but other agency and state variables' t-significant values were not significant an alpha .05.

(c) **FORMOCC** and **SPAN** using dummy variables for agencies and states:

Multiple-R = .976, R-square = .953, adjust R-square = ., F-value = 281.6, F-significant = .0000, **SPAN**'s t-significant value = .0000, but other agency and state variables were not significant an alpha .05.

⁵ See Ely et.al (1991; pp.143 -145) in Chapter 5 on interpreting of qualitative data. The idea of thinking units act as broadly framed sorting files or abstraction of data into several categories.

⁶ SPSS prints significant level less than .00005 as zero. If the significant level is higher than .00005, it would have been round up. When the significant level is less than .00005 it means that less than 5 in 10,000 that we would get sample result like this if the variable are independent in the population (see M.Norusis, 1986; p.244).

⁷ The detailed analysis of the total project cost per unit compared with the loan approved according to plan is as follows:-

COMPARISON BETWEEN TOTAL COST PROJECT COST AND THE LOAN APPROVED BY PLAN

(in the number of projects)

Cost/Plan	3MP	4MP	5MP	Total
Cost Equal to Loan	29	30	1	60 (36.1%)
Cost Lower than Loan	5	16	1	22 (13.3%)
Cost More than Loan	46	28	10	84 (50.6%)
Total	80	74	12	166

Note: missing case: 0

⁸ The comparisons of project cost and estimate is as the following table:

**COMPARISON BETWEEN TOTAL COST PROJECT COST AND THE LOAN
APPROVED BY PLAN**
(in the number of projects)

Cost/Plan	3MP	4MP	5MP	Total
Cost Lower than Estimate	27	36	3	66 (40.7%)
Cost More than Estimate	53	34	9	96 (59.3%)
Total	80	70	12	162

Note: missing: 4 cases

⁹ Interview with Ying.

¹⁰ Opinion expressed by Ying in the interview on, 29.11.1994.

¹¹ Interview with Aziz. Similar opinions expressed by Rawi, Hardy and ROHS.

¹² Interview with Chali on 2.12.1994. Excerpt from this interview has been mentioned elsewhere in Chapter 9.

¹³ Long house a form of temporary dwelling to resettle squatter while waiting project construction and completion.

¹⁴ Reason of indecisiveness because lack of proper plan and still searching for proper site for the squatters resettlement. In December 1994, the state government decided to turn down this offer although increased the amount because it was unable to comply with the condition imposed by the EPU and lacked of suitable state land.

¹⁵ Perspective viewed by HALO based on interview on 23.11.1994.

¹⁶ Perspective viewed by Aziz based on interview on 3.12.1994

¹⁷ Perspective viewed by Rosly based on interview on 8.11.1994

¹⁸ Excerpt from Interview with HALO, a senior programme administrator at the Ministry of Housing and Local Government.

¹⁹ For a detailed description on project monitoring and evaluation system in Malaysia, see Ian Masser, "The Use of Monitoring Systems: An Evaluation of the SETIA Project Monitoring", TRP 108, Department of Town and Regional Planning, University of Sheffield.

²⁰ From quantitative data: about 51% of these projects were in the local authority areas, but only 10 % were subjected to local authorities' planning approval while 90 % were not, because they were outside local authorities' jurisdiction or subject by prior arrangement to planning exemption. However, this become a focal point and have impacts amongst respondents.

²¹ Interview with Ying 29.11.1994.

²². Interview with Halo, and the same view point agreed by Chali, Kani, Ying, Rawi and Aziz.

Appendix to Chapter 10

List of Variables and Their Descriptions

Variable's Name	Scale of Measurement	Descriptions
Planning Stage		
AMEND	Nominal	Whether any amendment made to the project (size, house type, design, lay-out plan etc.)
EXTEND	Nominal	Whether the project is an extension from previous phase of development.
FEASIBLE	Nominal	Whether a feasibility study was made for the project
IDENTIFY	Nominal	When site for the proposed project was identified?
LANDREPT	Ordinal	When land report about the proposed project site was made
SITECHG	Nominal	Whether a change of site to another location was made to the project
SURVEY	Ordinal	When site survey was made to the proposed site
FORMAPLY	Interval	The length of time taken from project formulation to the loan application submitted to MHLG.
APLYTCHL	Interval	The length of time taken from loan application received by MHLG to the decision of TCOHL
PLANSTAG	Interval	The time taken for the planning stage; calculated based on the length of time taken from project formulation to loan approval by TCOHL.
Resourcing Stage		
TCHLTSRY	Interval	The length of time taken from the loan approval by TCOHL to the approval by the Treasury.
TSRYAGRE	Interval	The length of time taken from the Treasury's approval to the signing of agreement between states and federal government.
AGREBEGN	Interval	The length of time taken from the agreement signed to the starting of project's construction.
LOANSECR	Interval	The length of time taken to reach the stage of securing loan from Treasury. This is calculated of the time taken between project formulation to the signing of agreement.
RESOCING	Interval	The whole resourcing stage; the time taken between loan approval by TCOHL and the first loan withdrawal to the states government.
Construction Stage		
CONSTRUC	Interval	The length of time taken for project construction.
FORMBEGN	Interval	The length of time taken calculated from the project formulation to the beginning of construction.
TCHLBEGN	Interval	The length of time taken between TCOHL approval and the starting of construction.
Completion Stage		
ENDCOMP	Interval	The length of time taken from the end of building construction to project totally completed (include any additional work).
COMPOCC	Interval	The length of time taken from project totally completed to houses occupation by buyers or renters.
COMSTAGE	Interval	The completion stage. The time taken between ends of building construction to houses occupied by buyers or renter
Overall		

Process		
SPAN	Interval	The length of time taken between project formulation to project's physical work's completion.
FORMOCC	Interval	The length of time taken between project formulation to houses occupation by buyers or renters.
STATUSIN	Nominal	Project's completion time; whether the project was completed within the same plan 'five-year' plan or outside the intended plan (a dependent variable)
STATUS3	Dummy	Dummy variable for project completion status. Completed within five-year plan = 1, 0 = completed in other five-year plan
FOROC5YR	Nominal	Project's completion time: categorised of whether completed less than five years or more than five years (a dependent variable).
FOROCQTL	Ordinal	Project's completion time which is divided into four quartiles (a dependent variable)
Other Variables		
PLAN	Ordinal	The 'five-year' development plans: 3MP, 4MP and 5MP
3MPLAN	Nominal	Dummy variable for five-year plan. Code 1 = 3MP, 0 = other plans
4MPLAN	Nominal	Dummy variable for five-year plan. Code 1 = 4MP, 0 = other plans
5MPLAN	Nominal	Dummy variable for five-year plan. Code 1 = 5MP, 0 = other plans
STATE	Nominal	The states
JOHOR	Dummy	Dummy variable for the state. Code 1 = Johor, 0 = other states
PAHANG	Dummy	Dummy variable for the state. Code 1 = Pahang, 0 = other states
PENANG	Dummy	Dummy variable for the state. Code 1 = Penang, 0 = other states
PERAK	Dummy	Dummy variable for the state. Code 1 = Perak, 0 = other states
SELANGOR	Dummy	Dummy variable for the state. Code 1 = Selangor, 0 = other states
SEMBILAN	Dummy	Dummy variable for the state. Code 1 = N.Sembilan, 0 = other states
TRENGANU	Dummy	Dummy variable for the state. Code 1 = Trengganu, 0 = other states
AGENCY	Nominal	Implementing agencies for this PLCHP: NHD, SEDC or PWD
NHD	Dummy	Dummy variable for National Housing Department (NHD): Code 1 = NHD. 0 = other agencies
SEDC	Dummy	Dummy variable for State Economic Development Corporations (SEDC). Code 1 = SEDC, 0 = other agencies
PWD	Dummy	Dummy variable for Public Works Department (PWD). Code 1 = PWD. 0 = other agencies
Funding Variables		
ALL\$UNIT	Ratio	The mean allocation of funds for the project. (The total allocation of funds for a project divided by number of houses for the project)
E\$TUNIT	Ratio	Estimated amount of project cost per house (unit)
APP\$UNIT	Ratio	Amount of loan approved for the project per house (unit)
TDR\$UNIT	Ratio	The amount of project's construction tender per house (unit)
CO\$TUNIT	Ratio	Total project cost per unit of house
ADJ\$UNIT	Ratio	Adjusted total project cost per unit of house to 1990's price.

Chapter Eleven

SUMMARY, RECOMMENDATIONS AND CONCLUSION

INTRODUCTION

Three previous chapters of this thesis have emphasised data analyses and discussion to explain target under-achievement and variable performance. They specifically focused on three key topics: (a) the programme's preparation and planning stage; (b) the programme's funding and resourcing; and, (c) the inter-actions amongst agencies and actors at the bottom. Data analyses have been presented by (a) the quantitative approach in Chapter 8; (b) the qualitative data analysis in Chapter 9, and; (c) hypotheses testing, combining the quantitative and qualitative data in Chapter 10. Therefore, this chapter serves to fulfil three purposes: firstly, to present the essential gist of findings, secondly to re-examine an alternative view on programme implementation; and thirdly to highlight lessons learnt from PLCHP implementation and then to propose some recommendations.

Three hypotheses have been presented and tested in this thesis. Their results confirmed there were associations between programme performance and the preparation made at planning planing stage, the funding and resourcing provided, and the effect of interaction between agencies and actors at the bottom. Data analyses in these three chapters also confirmed there were variations in the time taken to complete the implementation process and the amount of funds provided in the three five-year plans, states and implementing agencies. Analyses confirmed that delays during the planning stage affected other stages and the overall programme performance. Delays in project implementation were also affected by inflation which caused increase in project cost. Target shortfall occurred because a large number of projects were not completed within the intended plan. Programme performance was also affected by the interaction between actors and agencies when other resources and services are held by them. Compliance with other agencies requirements' and responsiveness to some actors interest also affected programme performance.

Linkages With Data Analyses Section

The illustration about the linkage of this concluding chapter and three previous chapters on data analysis is depicted as in Diagram 11.1. The diagram shows that data analyses produce research findings in relation to programme performance and this leads to theoretical and practical recommendations.

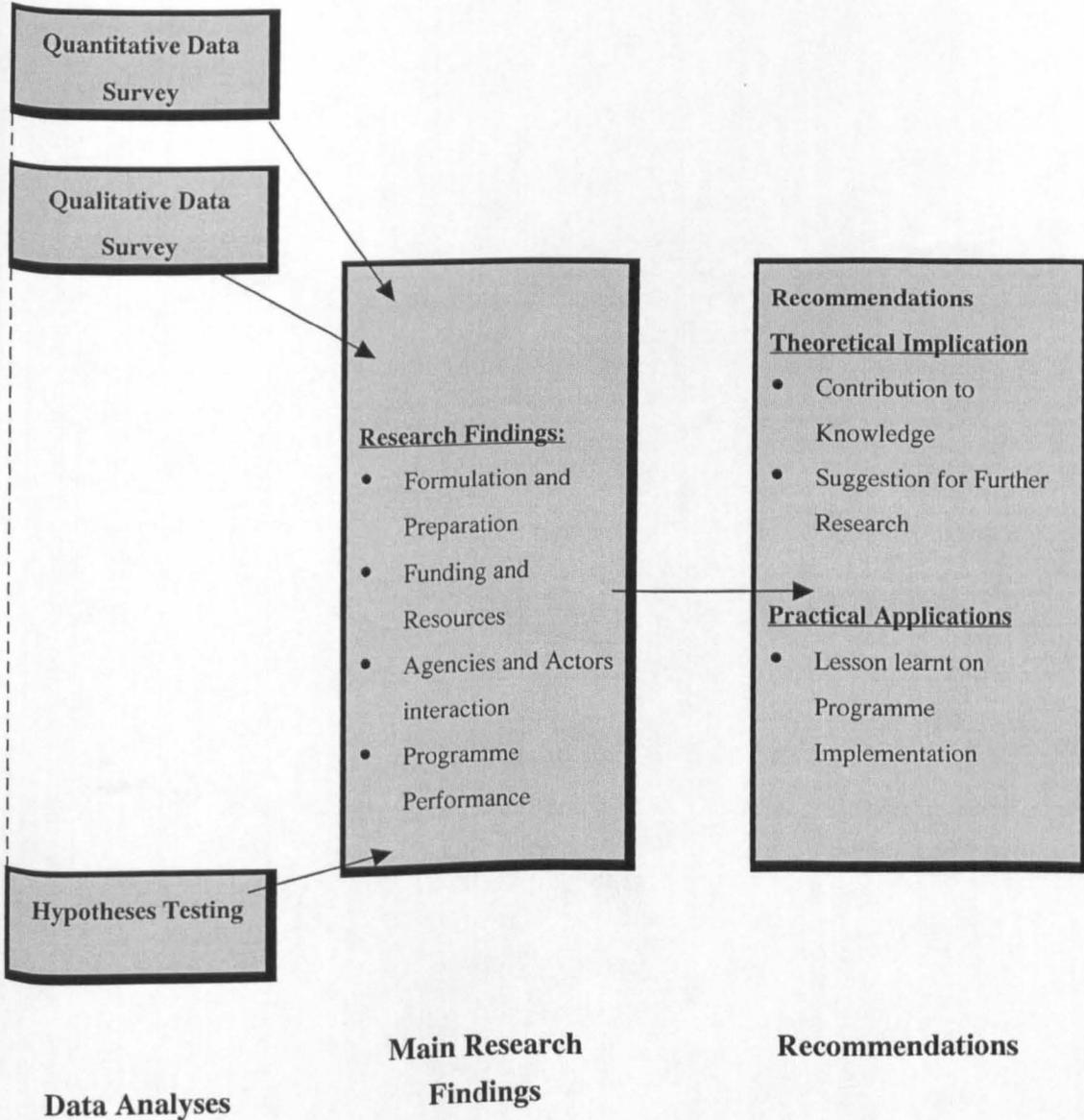


Diagram 11.1: Relationship of Data Analyses, Findings and Recommendations

GIST OF FINDINGS

Data analysis in this study has shown the pattern of programme variations occurring between plans, states and implementing agencies and has detected where delays occurred along the stages of the implementation process. The average time taken for completing projects was almost seven years so that *'two five-year planning periods'* were required to implement the housing projects. The mean between the five-year plans, though varied, nevertheless statistically indicates no significant difference. The proportion of time spent on project implementation was: about half of the time on project planning and preliminary preparation; about a quarter for the construction; and another quarter for project resourcing and other necessary jobs related to its completion. The longest time spent on project implementation was on the planning stage. The comparison of mean duration for each of the implementation stages among the three five-year plans showed no statistically significant difference. This means that there was no improvement and no learning, despite attempts to shorten the time and improve the performance. It confirms that an overlong time is still being taken.

Variability of performance occurred between the states where most states have a larger number of projects completed outside the intended plan. A comparison of the time taken for the four implementation stages (planning, resourcing, construction and completion) showed variability of performance between states but a comparison between the implementing agencies shows no significant difference found on the mean time taken in each of the four implementation stages.

Analysis of *preparation variables* suggests that for a project to achieve a shorter completion time, adequate preparation must be carried out before the formulation stage. During the preparation and planning stage, delays occurred in site identification because states were indecisive on whether to implement projects or not. Delay in one stage of the implementation process causes further delays in later stages.

It is established that there are relationships between programme performance and the funding allocated with the five-year development plans, the length of time taken over the implementation process, the states and the implementing agencies assigned to implement projects and other factors. The project funding and resourcing dependent on the allocation of resources devoted to it and upon the five year plan; delays in implementing the projects caused cost increases and meant that projects were also affected by inflation; as a result the states have to meet project cost from their own funding. Funding and loans provided would have been adequate if projects

had immediately proceeded to the construction stage. Delays in construction rendered the amount of loan provided no longer adequate to cover project cost. Correct estimation and the proper preparation of projects are important if agencies are to build within the funding limits.

Data analyses showed that there were variations in allocation of funds between five-year plans and individual states. This programme experienced inadequate funding where the total project cost was higher than the amount of funding provided by the federal government. This inadequacy of funding occurred because of delays in project implementation, where the amount of loans and the project estimates were no longer valid due to increase in project construction price, land price and other charges as time progressed. Findings from the qualitative data highlighted some of the problems faced in the allocation of funds, loan approvals and the project costs.

VIEW ON PROGRAMME IMPLEMENTATION

The body of literature on implementation study 'has reached a plateau' (Mazmanian and Sabatier, 1981; p.xi), advancing from merely assessing how a single decision was carried out to further progressing into the application of frameworks and synthesis and revision (Lester, et al, 1987; p.201). There have been many attempts to understand, explain, and analyse the relationship between programme and implementation. Similarly, a multitude of case studies with varying conceptual frameworks exist. However, there is still no generally accepted theory developed and little agreements among scholars in providing guidance to research on policy implementation (Mazmanian and Sabatier, 1981; p.xi). One of the drawbacks in this policy implementation area is where a typology for studying policy implementation is not yet developed, a major step toward theory building. For example, research on inter-organisation approaches to policy implementation is still characterised by diverse theoretical approaches (O'Toole, 1995). Approaches to explaining programme implementation is still divided into two approaches: the top-down and bottom-up approach.

The top-down approach is concerned with how the implementation process is structured in achieving the objectives, assumed only pre-determined actors are involved with the policy and evaluating the programme outputs based on stipulated programme objectives. This implies that implementation is measured strictly by

policy objectives as intended. For example in the PLCHP's case: measured by the achievement of targets at the end of five year plan in terms of number of houses completed, carried over and uncompleted. In contrast, the bottom-up approach is concerned with networks of organisations and actors at the bottom who are responsible for putting policies into practice and also taking into account others who are not mandated. The bottom-up approach sees policy implementation as a way to suit implementers rather than policy makers. They adopted the "interactive" approach involving "bargaining" and "negotiation" among actors and agencies. They viewed putting policies into actions as something that involves adjustments of objectives "between those seeking to put policy into effect and those upon whom action depends." (Barret and Fudge, 1981; p.25).

Analyses from this study confirm the bottom-up approach despite the programme implementation emphasised heavily on the realisation objectives which manifested through detailed programme and its targets. This is because the program performance was affected by actors and agencies at the bottom who were more concerned with promoting their own interests. They were not bound by the target, time and cost limit constraints. The analysis also confirms a broader perspective of the interactive among actors and agencies where it is not strictly only to "those upon whom action depend" but also from those sanctions, agreements and approvals were required. This had been demonstrated in several projects where implementation delays occurred in obtaining agreements, sanctions and approvals from a range of actors and agencies. In view of the urge to carry out projects, implementers have to comply with the sanction imposed or taking into consideration of how to get agreements from various agencies and actors at the bottom.

In implementing public programmes, the state has to deal with a number of agencies and actors that are in connection with the programme, where they may cause deflections, hurdles and, to an extent, uncertainty in many decisions especially during the early implementation stage. This eventually affects programme performance in achieving pre-determined targets. The non-agency actors consist of politicians, contractors, land owners and squatters where they may affect and deflect the project's implementation process. In this case, political interference has occurred during site selection and occupant selection because politicians are concerned with who are allocated these houses and whether this could bring support to them. Political interference at the scheme level causes delays in site selection and occupant selection.

Inter-agency relationships at the bottom of the hierarchy have become more complex and there has been a change of climate, where government projects are treated similarly to private sector projects. The imposition of planning permission and technical requirements have made the implementation of this programme more difficult. The basic issue, where clearance is to be obtained, is the question of a lengthy process and increased standards imposed which finally involve increases in cost.

The contribution of this study is enhancing and providing better understanding on factors affected policy implementation. In terms of practical application this study helps to understand better the aspect of public low cost housing programme implementation in Malaysia. This study has identified major problems in the implementation stage and also calculated the length of time taken in each of the implementation stages. This directly traced down problem occurred in each steps of the implementation process.

The line of approach taken by this study was gathering information from those directly involved with the programme in an attempt to achieve the programme intention and target. This study, however, did not conduct investigation of how others regulate or impose requirements on this programme. For example, the perspectives of local authorities when they imposed planning requirements or when the issuing of a certificate of fitness for building occupation.

LESSONS LEARNT FROM PROGRAMME IMPLEMENTATION

Implementation is not simply a straight-forward action of carrying out decisions as intended. Implementation implies actions related to execution, carried out, fulfilled and brought to completion. The execution process involves not only achieving the end goal but proceeding through a large number of detailed processes, going through separate levels, inter-agencies and conformity with requirements and procedures. Executing a directive involves a number of people and activities before the desired results can be achieved. Based on this proposition a number of lessons

have been learned from the public policy implementation specifically to the PLCHP in Malaysia:-

- ***The Programme itself:*** although the targeted numbers were not achieved within the intended time, in general it is a realistic and workable programme and its implementation can be improved through drawing of lessons from projects completed within a specific five-year plan, those completed outside the intended five-year plan, and others left incomplete.
- ***Lack of adequate preparation*** for projects during the formulation stage has caused projects to be dragged into further delays at other stages. Several constraints at this stage such as vague and generalised guidelines led to lists of projects being prepared in a hurry due to time constraints, difficulties in finding suitable land and poor site selection. All these contributed to poor project appraisal for each five year plan. Projects can be improved if adequate preparation is made as shown by some of the average and quickly-completed projects. To overcome this problem, it is suggested that the central agencies must inform state governments early and they should be given ample time to prepare their project proposal.
- ***Inter-action and co-ordination:*** that the implementation process of this programme involved the bottom-up decisions such as in the site selection, project location, project size and occupant selection. In implementing the programme at the bottom it involved interactions between a range of actors and agencies. To achieve harmony, everyone who has interests in and jurisdiction over this matter must be properly informed or consulted. When a programme involves two levels of government and various 'actors', the basic implementation problem is the problem of co-ordination and the assembly of resources from the two levels of government and agencies operating in this programme.
- ***Inter-agency and actors at the bottom*** differed in their interests and perceptions over a programme; therefore an influential leadership is needed in co-ordinating these various interests, perceptions and opinions to be in line with the PLCHP objective. An agency responsible for the programme must also be able to negotiate and persuade others in realising the programme objective.
- ***Lesson to Policy makers and implementers:*** that they should never underestimate squatters' and land owners' capability in affecting the implementation

process through their connection with politicians, especially if their livelihoods are at risks. Evidence from some projects proved that their resistance caused project delays, to the extent of cancellation. However, they would co-operate and cause very little resistance if they were promised the benefit of obtaining legal houses from the project. Thus, policy makers and implementers must not view squatters' eviction from the perspectives of the land law only but to take into account unforeseen circumstances and other contingency aspects in aiming at the programme's target.

Recommendations for Programme Implementation

The author believes that the programme performance can be improved by better actions carried out at every stage of the project implementation process, especially by greater monitoring of and emphasis on the formulation and planning stage. Specific recommendations for improving this programme include the following:-

- ***The formulation stage:*** improvement to this programme must begin with better preparation at the formulation stage by issuing clear guidelines, giving adequate time for preparing project proposals and by conducting proper feasibility studies and project appraisal. All these pre-requisites are designed to ensure project success and to overcome weaknesses during the formulation stage.
- ***A shorter implementation process and fewer steps*** are required to complete the projects. Attempts must be made to avoid delays and to shorten the implementation time by giving directives to government agencies to expedite the process at every step. For example, the land acquisition process must be settled within six months. There must be improvement to the procedures and red-tape by shortening the steps involved. Therefore attempts to avoid delays and to shorten certain procedures are essential key to the success of the project.
- ***Funding and resourcing*** for projects must anticipate increases in cost by the end of the planning period. Preparation of project planning and estimation must consider the cost increase to avoid inadequate funding. The federal government should revise its policy on the amount of funding, cost limits and maximum allowable selling price for this programme in view of the fact that the cost has increased in nominal and constant price throughout the three five-year plans. Findings from this study have proved that projects cost more than the maximum cost limits and the amount funding provided by the federal government.

- ***Better relationships and understanding*** over this programme by actors and agencies at the bottom would help to reduce constraints to gain support and to make people view this programme in an objective way rather than in accordance with the agencies' or actors' yardstick.
- ***The need to ensure realistic and achievable targets*** for low-cost and other housing targets. Evidence of underachievement of the overall housing target and low-cost housing target in every five-year plan has shown the need for a more realistic and achievable target when formulating the programme for a new five-year plan.
- ***The challenge faced by Malaysia is to realise the housing objective*** that it must provide every citizen with access to housing especially the lower income-groups. The scale of the housing problem facing Malaysia in the future will be greater as a result of population increase, urbanisation and changing lifestyle. Improvements to the implementation of the overall housing programmes and housing policy must gear towards meeting this challenge.
- ***The lower profile of the public sector*** in the Sixth Malaysia Plan (1991 - 1996) and the Seventh Malaysia Plan (1996 - 2000) has shifted a greater responsibility of housing supply to the private sector. These five-year plans adopted the private sector led approach for development and economic growth. In the area of housing, due to the economic prosperity of the country, more focus was put on medium and high cost housing because of the more lucrative profits from this category of housing. Thus, to encourage private sector's housing development the government must provide more incentives and a revision of the M\$25,000 maximum selling price of low-cost houses. This would encourage construction of more low-cost houses by public corporations and private developers.
- ***The wider regional variations*** in low-cost housing programme performance must be overcome. States must improve their achievements in completing low-cost houses as a measure to narrowing these variations while at the same time meeting the housing needs of the lower-income groups for affordable houses.

Suggestion for Future Research

In general Malaysia has been successfully implementing a number of public programmes ranging from socio-economic development to infrastructure development. Thus, an emerging question arises whether other housing programmes in the five-year plan also faced problems similar to those experienced by this PLCHP. As an object of further research it would be interesting to carry out a comparative study between this

programme and other housing programmes for lower-income groups such as the housing programme implemented by the land agencies, the State Economic Development Corporations and the Urban Development Authority. This would show to whether similar problems have occurred.

Conclusion

This research on the implementation of the Public Low-Cost Housing Programme has fulfilled three research objectives as set earlier: first, seeking explanations for the programme's underachievement; second, examining the programme's prominent features and describing of its implementation process; and, finally, attaining relevant findings for the refinement and improvement of this programme. The main finding is that factors affecting project performance were the quality project preparation at the planning stage, the gap between funding and project cost and the interaction of agencies and actors at the bottom.

As noted by the quantitative and qualitative data and the final confirmation of the hypotheses, successful implementation is dependent upon concrete actions at the planning stage which expedites the commencement of construction. This in turn would help to make allocated financing provision adequate. Furthermore, the better relationships amongst actors and agencies at the local level and committed to the programme objective would improve the implementation of this programme of which the aim is to fulfil the housing needs of lower-income groups. Agencies have to look at the ultimate aim of the programme not just the narrow perspectives of their technical requirements and agency interests. To conclude, we contend that adequate actions at the planning stage, adequate funding support and better understanding of the programme, improved inter-agency co-operation on the programme at the bottom and liberalised procedures are important in increasing the performance of public policy.

Findings deriving from this thesis can have significant implications on the implementation of the low-cost housing programme in Malaysia, especially in light of the Seventh Malaysia Plan (1996 - 2000) launched early this year. Although there is a shift of policy stance by the government in its approach to housing and in the light of privatisation which is as the buzzword for the present policy making scenario, this PLCHP is still necessary for low-income groups because of its convenient purchasing arrangement and because it builds houses in the area where the private sector is not operating for financial reasons.

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DATA COLLECTION ROSTER

*Note: **Formulated project** means that the project was officially recognised by the federal and state government which both parties agreed to implement it and development allocation was made at the beginning of each five year development plan or a revised plan.*

File Reference at MHLG:.....

File Reference at State Secretariat:.....

File Reference at Implementing Agency (NHD/SEDC/PWD).....

Date Roster Prepared:.....

1. PROJECT'S BACKGROUND

1.1. Project's Name:.....

1.2. State: Please circle

1= Johor

8= Perlis

3= Kedah

9= Pulau Pinang

3= Kelantan

10= Selangor

4= Melaka

11= Trengganu

5= N.Sembilan

12= Wilayah Persekutuan

6= Pahang

13= Sabah

7= Perak

14= Sarawak

1.3. Name of District:.....

1.4. Name of Local Authority:.....

(if the project located within a local authority area)

1.5. Which Five Year Plan period the project was formulated?

1= 3MP (1976-1980)

2= 4MP (1981-1985)

3= 5MP (1986-1990)

1.6. Date of Formulation:.....

1.6. The project's location was classified as?

1= URBAN

2= URBAN-FRINGE

3= RURAL

4= OTHERS

1.7. Was the project within local authority's controlled area?

(Investigate the lay-out plan or loan application particulars)

1= YES

2= NO

1.8. Was this project an extension of previous phase?

1= YES

2= NO

1.9. What were the number of houses proposed in the lay-out plan?

[][][][]...units

1.10. Name of Agency who prepared the layout plan?

1.11. State the date when the lay-out plan was prepared?

[][][][]

1.12. Lay-out reference number (if applicable)

1.13. When was the lay-out plan obtained approval from planning authority?

Date: [][][][]

1.14 State the name of Authority/Agency who approved the lay-out plan?

1.15. Please provide any amendment to the lay-out plan (if any)

Date	Number of Houses	Reasons

1.18. Number of houses built when the project finally completed?

[][][][][] units

1.19. What type of houses constructed for this project?

- 1= SINGLE STOREY TERRACE/BRICK
- 2= DOUBLE STOREY TERRACE/BRICK
- 3= SEMI-DETACHED/BRICK
- 4= SEMI-DETACHED/WOODEN
- 5= SINGLE HOUSE WOODEN
- 6= MEDIUM RISE FLATS
- 7= HIGH RISE FLATS
- 8= OTHERS

1.20. What was the intended AIM of the project when it was formulated?

- 1= HOUSING FOR THE LOW INCOME PEOPLE
- 2= RESETTLEMENT PROGRAMME
- 3= HOUSING FOR FACTORY WORKERS
- 4= REHOUSING FOR THE FISHERMEN
- 5= COMBINATION OF SEVERAL PURPOSES
- 6= OTHERS

2. INFORMATION ON LAND/SITE/ PREPARATION

2.1. When was the site for the project being identified?

- 1= identified before project being formulated.
- 2= identified within three months after the project has been formulated
- 3= identified within three to six months after the project has been formulated.
- 4= identified more than six months after the project has been formulated.
- 5= identified only in the next five year plan
- 6= never identified at all

2.2. Has the land investigation or site report prepared?

- 1= Prepared before project being formulated.
- 2= Prepared within three months after the project has been formulated
- 3= Prepared within three to six months after the project has been formulated.
- 4= Prepared more than six months after the project has been formulated.
- 5= Prepared only in the next five year plan
- 6= never prepared at all

2.3. Was there any change to the proposed site?

- 1= No
- 2= Yes, Once
- 3= Yes, Twice
- 4= Yes, More than Twice

2.4. If changed occurred, was it changed to:

- 1= Site only (within same locality/district)
- 2= Site only with changed on number of units to built (change of scope)
- 3. Change to the project (Project replaced)
- 4. Change to the project and scope

2.5 What type of land acquired for this project?

- 1= State land
- 2= Reserve land
- 3= Private Land (by Compulsory Acquisition)
- 4= Other types

2.6. What justification made to locate the project on a particular site?

- 1= No clear justification
- 2= Availability of State Land
- 3= Nearness to infrastructure and other facilities
- 4= Socio-political reasons
- 5= Marketability of the project
- 6= Advised by Land Office/District officer
- 7= Others.

2.7. When was the application for the land made to the Land Office? (Date)

2.8 When was the land made available for the project? (Date)

2.9. What was the size of land (acre/hectare) made available for the project?

2.10. If the land was acquired from private land owner, state the amount for the compensation paid?

2.11. What were the project's density per hectre

2.12. When was the project estimate prepared?

- 1= Prepared before project being formulated.
- 2= Prepared within three months after the project has been formulated
- 3= Prepared within three to six months after the project has been formulated.
- 4= Prepared more than six months after the project has been formulated.
- 5= Prepared only in the next five year plan
- 6= never prepared at all

2.13. Was there any survey work carried out before the project formulated?

- 1= YES
- 2= NO

2.14 Was there any technical feasibility studies made for the proposed project?

1= Not Available

2= Working Paper

3= Technical Feasibility Studies

4= Detailed Technical Feasibility Studies

by Consultant/ Technical Personnel

2.15. Was this project cancelled? If cancelled state reasons for this cancellation?

3. PROJECT RESOURCING

REVOLVING FUND

3.1. Was the revolving fund available for the project financing?

1= YES

2= NO

3= Not Sure/No record

3.2. If the revolving fund available, was it utilised for the project funding?

1= YES

2= NO

3.3. What were the original cost of project's estimated?

3.4. What were the estimated average cost per unit?

\$

3.5. Information about project's application made by State's Housing Division to Jawatankuasa Teknikal Pinjaman Perumahan KPKT (TCOHL at MHLG).

Date of Application	Number of Houses	Amount of Loan Requested (M\$)	Average Cost Per House (M\$)

3.6. Information about decisions of Jawatankuasa Teknikal Pinjaman Perumahan KPKT (TCOHL at MHLG) about the project financing.

Date of Meeting	Number of Houses	Total Loan Approved	Additional Loan Approved (M\$)	Average Cost Per House (M\$)

3.7. Has the **application for loan ever faced any difficulty/** rejected or postpone by the Jawatankuasa Teknikal Pinjaman Perumahan KPKT?

3.8. State the dates and amount of loan signed between the State and Federal Government?

Date of Agreement	Number of Houses Approved	Total Amount of Loan Approved	Amount of Additional Loan Approved

LOAN WITHDRAWALS

3.9. Information about request of loan withdrawal *made by the state government* to the Federal Government?

Date of Application	Amount Requested (M\$)	Amount of Expenditure Already Made by State	Percentage of Project's Progress

3.10. (If withdrawal made through MHLG) Information about applications for loan withdrawals recommended by the MHLG to the Treasury?

Date of Recommendation Sent to Treasury	The Amount Recommended

3.11 Information about loan payments made by the Treasury to the state government?

Date	Amount Paid (M\$)

3.12. What was the total amount of loan withdrawn for the project by the state government?

4. APPROVAL PROCESS

4.1. Was this project subjected to any planning and building plan approvals from the local authority?

- 1= YES
- 2= NO
- 3= EXEMPTED

4.2. When was the date of application for planning permission submitted to local authority?

4.3. When was the date of planning permission granted by the local authority?

4.4. What are the reasons, *if application* for planning permission ever rejected by local authority?

- 1. Non-Conformity to Administrative procedures
- 2. Non-Conformity to Planning matters
- 3. Non-Conformity to Land Laws and legal matters
- 4. Social and Political justifications
- 5. Other reasons (Please state)

4.5. When was the date of application for building plan permission submitted to local authority?

4.6. When was the date of building plan permission approved by the local authority?

4.7. Besides the local authority, how many other agencies were refereed related to proposal for development approval?

4.8. After the planning and building permission had been approved, was there any extra technical requirements imposed later?

1= YES

2= NO

4.9. When was the application for certificate of fitness made to the local authority?

4.10. When was the certificate of fitness issued by the local authority?

4.11. When was the handing over of project made to the state government?

4.12. When was the official date of occupation to the houses by buyers/ renters, etc.?

TENDER PROCUMENTS

4.13 Details of Construction Tender:

Date of Tender Advertised	Date of Closing	Date of Tender Board's Decision	Original Amount Awarded	Total Amount Awarded (inc. Variation order)

4.13 When was the tender made effective? (Date)

4.14. Was there more than one tender process occurred to this project?

1= YES

2= NO

4.15 What was the reason for more than one tendering process?

1= failure of first contractor

2= procedure requirement

3= change of tender scope and specifications

4= other reasons

4.16 What was the total cost of the project (includes 4.19, land cost and contribution to utility agencies)?

5. IMPLEMENTING AGENCIES

5.1. What was the implementing agency responsible for the project?

1= National Housing Department

2= State Economic Development Corporation

3= Specialised State Housing Authority

4= Public Works Department

5= Other agency

**GUIDED INTERVIEW QUESTIONNAIRE ON
PUBLIC LOW COST HOUSING PROGRAMME IN MALAYSIA**

SECTION ONE: QUESTIONS RELATED TO SPECIFIC PROJECTS

This section aims to gather information about the development of a specific public low cost housing project. The questions below will help to facilitate description from respondent's perspective based on his/her knowledge, experiences and opinion on the project. If respondent involved with more than one projects, he/she is requested to describe responses separately for each project listed:-

Project's Name	Location	Five Year Plan
1.		
2.		
3.		
4.		
5.		
6.		
7.		

1.0. RESPONDENT'S BACKGROUND

1.1. Could you please say in what way you were involved with the Public Low Cost Housing Programme (PLCHP) by describing the following:-

- (a) the post you held,
- (b) the name of your department,
- (c) number of years of serving the programme, and
- (d) your duties and responsibilities.

1.2 Were you given any particular PLCHP projects to look after? Were you given any other assignments, such as to look after projects in certain districts, certain states or at certain stages of project implementation? (e.g. in-charge of financial matters, responsible for site supervision, in-charge of administrative matters)

2.0. INCOMPLETE PROJECT:

Name of the Project:

2.1. This project was formulated and included in the list of approved projects for the *'five year plan'*, but was later cancelled. As a result, this project never reached the completion stage. Therefore in relation to this project could you please describe the following:-

- (a) Do you remember how this project was selected for the list of five year plan projects? What criteria and justifications were used to select this project?
- (b) What problems were faced by this project?
- (c) What reasons led to the project's cancellation?
- (d) What stage had been achieved by the project when it was cancelled?
- (e) Who made the decision to cancel the project?
- (f) Do you think this project was different from other projects?
- (g) What happened to the fund allocated to this project? What happened to the project's site if land was acquired?
- (i) Was this project replaced by another project?
- (j) Let us assume that these problems could have been overcome or did not happen. Do you think the project could have been implemented successfully?

2.2. By looking at the project brief as provided with this questionnaire, what is your comment on the reasons described for the project's incompleteness.

2.3. In general, based on your knowledge and experience what were the reasons that led to the cancellation of other projects.

2.4. In general what problems were faced by other projects which made them unable to reach completion stage.

3.0.THE COMPLETED PROJECT

Name of the Project:

3.1. Could you please describe in what way were you involved in this project? Please provide the nomenclature of the post you held and your general responsibilities connected to the project.

3.2. This project was formulated and included in the list of approved projects for the '*five year plan*'. Do you remember how was the selection made that proposed this project into the list of five year plan projects? What justifications used when considering this project?

3.3. What were the roles and responsibilities given to your department in relation to the implementation of this project?

3.4. Was this project faced with any difficulties at the preliminary implementation stage? If it did not face any difficulties, do you think its progress was similar to or faster than other comparable projects?

3.5. Did this project faced any difficulty in obtaining the land ? What caused this difficulty and how it was resolved? If no, what factor assisted in obtaining the land for this project.

3.6. Did this project face any difficulty in obtaining financing from the federal government ? Was the state government informed of the basis for the loan approval? Was the amount provided adequate to cover the total project cost? If inadequate, how was this problem resolved? Was there any special consideration given to this project?.

3.7. Did this project face any difficulties during the construction stage? If so, were the difficulties rectified and can you describe in what ways?

3.8. In your opinion what were the strengths and weaknesses of this project? If it was delayed what were the causes? If this project was fast what factors expedited it?

3.9. What efforts were taken by state government and the implementing agency to ensure that this project was completed within the five year plan and built within the amount of loan approved by the central agencies?

3.10. Did this project face difficulties in getting planning and building approval? If so, how was this problem resolved between agencies?

SECTION TWO:

GENERAL QUESTIONS

The objective of section is to try to develop general ideas about the public low cost housing programme from the perspective of the people who were involved in the programme.

4.0 PROGRAMME FORMULATION

4.1. As you are aware, before the beginning of any 'Five Year Plan' a certain process of programme formulation was carried out.

- (a) Can you describe the process of project submission from the beginning until it reached acceptance as an approved project for the five year plan?
- (b). What criteria were used by you or your department when proposed projects for the five year plan?

4.2. If you can still remember, were you provided with any guidelines (circulars, directives, etc) when formulating projects for the five year plan?

- (a) If yes, which authority prepared it?
- (b) What was the main content of the said guidelines?
- (c) What was the main emphasis?
- (d) Did you or your department follow the guidelines provided?

4.3. Once projects were formulated and included in the list of 'approved projects' for a particular five year plan, what actions were usually taken after that?

4.4. Can you describe how decisions were made in relation to location, size and costing of the project?

- (a.) What criteria were normally used for making site selection of the project?
- (b.) Do you think the type of house proposed was also an issue during this early stage of implementation?
- (c.) What are other issues and problems you experienced during this early stage of project implementation?

4.5. What do you think about the length of time given for project preparation before the five year plan?

- (a.) Would you suggest any improvement?
- (b.) If you were happy with it, state your reasons.

5.0. PROJECT RESOURCING:

5.1. Do you know how the central agencies decide on the amount of loan approved for any particular project?

5.2. What factors determined when the project's loan application can be submitted to the Ministry of Housing and Local Government?

5.3 Do you aware that the amount of loan applied by the state was higher than the loan approved by the Technical Committee of Housing Loan?

- (a) If so, in your opinion why this was happened?
- (b) What criteria were used by the committee to consider loan application?
- (c) Were these criteria known to programme administrators?

5.4. What normally were done when the amount of loan approved was inadequate to meet the project's cost?

5.5 In your opinion what problems normally caused delays in loan application? How could this stage of implementation can be expedited?

5.6. What were the main reasons of inadequate funding?

6.0. CONSTRUCTION:

6.1. Can you describe what are the responsibilities of implementing agency in relation to the project's construction works? When normally construction take place?

6.2. Construction's problems:

- (a) What problems usually faced by contractors?
- (b) How were these problems affected the project implementation?
- (b) What action normally taken to contractors incapable to complete projects?
- (d) What effect to the project if new contractor had to be appointed?

6.3. If known to you, what actions involved after the project had been completed by the contractor? What sort of additional works required before a house can be surrender to the tenant or buyer?

6.4. In your opinion what factors expediting and limiting project's construction? How could this problem be overcome?

7.0 IMPLEMENTATION PROCESS

7.1. What do you feel about the bureaucratic procedures occurred in this programme?

- (a) Procedures related to formulating projects.
- (b) Procedures related to obtain loan approval,
- (c) Procedures related to loan withdrawals,
- (d) Procedures related to obtaining planning approval,

In what ways these procedures affect project's implementation process? What sort of improvements to the procedures introduced by the government?

7.2. What were major problems encountered in the implementation of the PLCHP? What are your suggestions to improve the programme and what areas you think to should be emphasized to improve the programme?

7.3. It was a common occurrence to PLCHP that a certain number of projects was unable meeting their targets, failing to complete on time within the plan and difficult to comply with the cost limit?

- (a) What is your opinion on this statement?
- (b) What were the necessary steps taken to ensure projects meeting their target, completed within time and built within the cost limit?

7.4. From your knowledge and experiences dealing with the process of public housing implementation what strike you about:-

- (a) The strength the programme?
 - (b) The weaknesses of the programme?
 - (c) Any attempt to improve the programme
 - (d) Suggest in any way that the weaknesses can be rectify?
- Or in what area would you like to see the programme improved?

7.5. Taking into considerations of current government policy favouring on privatization what would be the future of PLCHP after the end of the Sixth Malaysia Plan (1996)?

7.6. Given the same facilities and arrangement do you think the state government are willing to continue this programme in the future?

- (a) If yes, what do you think the prospect?
- (b) If no, what factors discourage this programme?

8.0 IMPLEMENTING AGENCIES

8.1. Do you know what was basis an implementing agency (National Housing Department, State's Economic Development Corporation, Public Works Department) chosen to implement the public low cost housing projects?

8.2. Do you think there were differences between these implementing agencies in terms of :-

- (a) The approach on project implementation?
- (b) Their performance to complete the project?

8.3. What were major problems encountered by the implementing agency in implementing the public low cost housing projects.

8.4. What is your opinion on the strength and weaknesses on this implementing agency arrangement?

9.0. REMEDY

8.1. Had implementation problems of the public low cost housing ever identified, reported and analyzed?

- (a) What attempts were made to minimized these problems?**
- (b) What channel was used to resolve this problem?**
- (c) What sort of forum ever discussed this problem?**
- (d) What type of responses did the people in those forum made to take the problems?**
- (e) Finally in your opinion has this effort contributed anything to the improvement of the programme?**

APPENDIX III**Consumer Price Index 1975 to 1995**

Year	Percentage of Increase	Percentage to 1990's Price	Percentage to 1995's Price
1975	4.5	56.3	47.8
1976	2.6	57.8	49.1
1977	4.8	60.7	51.5
1978	4.9	63.8	52.2
1979	3.6	66.2	54.2
1980	6.7	70.9	58.1
1981	9.7	78.5	64.3
1982	5.8	83.4	68.3
1983	3.7	86.6	70.9
1984	3.9	90.1	73.7
1985	0.4	90.5	73.9
1986	0.7	91.1	74.5
1987	0.9	91.9	74.5
1988	2.5	94.3	77.1
1989	2.8	97.0	79.3
1990	3.1	100	81.8
1991	4	104.4	85.3
1992	4.5	110.3	88.8
1993	4.5	115.3	93
1994	4.5	120.2	97.4
1995	2.6	125	100