

SQUATTERS NO MORE: SINGAPORE SOCIAL HOUSING

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Introduction

As with Latin America and Africa, the number of urban residents is fast expanding in Asia. Asia is also home to the largest concentration of poor people in the world (Chapman et al, 1999; Montgomery et al, 2001). About a quarter of the total urban population in Asia is living below the poverty line although the proportion may be higher in some countries. India and China each holds about a third of the region's urban population with many living in relative poverty (Jacquemin, 1999). Of the 12 million people in Mumbai, for example, about 50 per cent lives in slums, dilapidated *chawls* and on pavements. In the extreme, they join the number of homeless people, estimated to be in excess of 100 million in the world (UNCHS, 1999). In one recent estimate, Asia alone will need to invest a sum of US\$280 billion a year over the next 30 years to meet the basic needs of the population in housing and other urban sectors (Brockman and Williams, 1998).

The lack of housing access is one of the most serious and widespread consequences and causes of poverty in Asian cities. The improvements in housing that are important to improving the quality of life among the poor often do not receive the attention they deserve from policy makers (Daniere, 1996). To make any appreciable improvement, substantial government spending is needed, both in the physical expansion of the city's infrastructure and implementation of poverty alleviation programs. Buttressed by the heritage of literature that argues the importance of affordable and improved housing in urban poverty reduction (see, for example, Mitlin, 2001), the immediate research issue is how poor families can access urban shelter more affordably.

By its policy interventions, the state has the power to assist the poor and uplift their situation. A review of the literature indicates two broad approaches to policy interventions in poverty alleviation (Ahluwalia, 1990; Echeverri-Gent, 1993). The first is a more direct approach comprising those policies intended to reduce the incidence of poverty to explicitly defined levels through such anti-poverty programs as self-employment and micro credit for small businesses. The latter schemes, for example, the Alexandria Business Association's micro-credit scheme for Small and Medium-Sized Enterprises (SMEs) in Alexandria, Egypt, generally offer small loans often with few collateral conditions and flexible repayment schedules. By comparison, the second approach is indirect and somewhat longer term. It involves the adoption of growth-oriented policies to make efficient use of resources to accelerate economic development and spread the benefits to the poor. Strategies include ensuring greater availability of land to the poor through land reforms and ensuring greater accessibility to social services, particularly housing, education and health services. The Indonesian Kampung Improvement Project, the Caracas Slum Upgrading Project, and the Singapore public housing program are examples of this approach. To what extent do the poor benefit from these policy interventions?

In this paper, we investigate the public housing policy of Singapore, which is often cited as a successful example of affordable housing production in Asian cities. As with Hong Kong, the Singapore public housing policy intervention for resident population has progressively led to society-wide enjoyment of the right to adequate housing. Some 85 per cent of Singapore's resident population lives in public housing. More than 850,000 housing units in 23 new towns have been constructed. While the poor elsewhere are homeless, the poorest 20 per cent of households in Singapore have equal access to housing resources, albeit public housing, and many are homeowners. The proportions bear witness to the realization of housing rights. How did Singapore scale up and provide housing access to the urban poor? What are the key policy tools and reforms? What are the pros and cons of those policy tools and interventions? To what extent are the lessons learned transferable notwithstanding Singapore's uniqueness (small city size, particular cultural, economic and political conditions)? More critically, to what extent does the public housing policy intervention improve the urban quality of life among the poor especially when their

traditional abode is changed from low-rise (2-3 story) to high-rise living (the tallest is presently 30-story and going taller)?

Given its widely recognized success, the Singapore public housing development has attracted keen research interest (see, for example, Wong and Yeh, 1985; Yuen et al, 1999) but few have clarified the public housing-urban poverty nexus. This provides the starting point for the present analysis of the performance of housing development. To set the context, we first describe the extent of poverty in Singapore followed by an examination of government attitudes and responses to the housing problem and delivery. This is followed by a survey of the key instruments for better housing for the poor. Finally, the paper will consider the reality of high-rise public housing living as the city continues to build taller housing for its growing population.

A Profile of Singapore Poverty

Singapore (land area of 690 sq km and GDP per capita of USD20,767) is ranked 25th on the 2002 United Nations Human Development Index with hardly any of its population living below the poverty line. While this may be the international outlook, closer examination points to poverty in an otherwise middle-class society. As reported by the leading local newspaper (*The Straits Times*, 29 Jan 2005), there appears to be a rising number of poor in Singapore with the present economic downturn: reviewing statistics from the Community Development Councils,^[1] the number of those needing financial aid has risen from 14,300 in 2001 to 22,500 in 2002 and 31,570 in 2003 and the amount given out has increased from S\$14.6m^[2] in financial year 2001 to S\$27m in 2003. The number of families on public assistance has similarly increased from 2572 households in Mar 2002 to 2714 households in Dec 2004. These families (means tested) receive between S\$260 per month for a 1-person household and S\$825 for households of 4 or more persons under the Public Assistance Scheme administered by the Singapore Ministry of Community Development, Youth and Sports.

As with Hong Kong, there is no official poverty line in Singapore. There is little data on the number in the 'Left-Behind Class'. If going by the recent number of street people picked up by the authorities, about 170-300 people in Singapore make the streets their home every year. Many (50%) are old (60 and above years old) and have no family, employment or skills. Others are abandoned by their own families. In one report, the Singapore Department of Statistics has released a figure of about 4 per cent of Singapore's resident population (or 120,000) living at or close to the poverty line in 1998 (*The Straits Times*, 31 May 2000). Income distribution as measured by the Gini coefficient was 0.481 in 2000. In the most recent population census (2000a), 12.6 per cent of households (116,300 households) in Singapore earned less than S\$1000 a month (average household income was S\$4943 per month). The lowest 10% of households excluding those with no income earners had an average monthly income of S\$459 in 2000 (average household size was 3.7) (Singapore Census of Population, 2001). The unofficial national definition of poverty drawn from the income qualifying criteria in various public assistance schemes seems to cover those surviving on less than S\$10 per person per day.

Singapore poverty appears miniscule in relation to countries elsewhere. Poverty data in recent poverty assessments (by urban poverty headcounts) for East Asia, for example, indicate that 16 per cent in Indonesia, 12 per cent in Philippines and 9 per cent in Vietnam's urban population are living in poverty (World Bank, 2002). According to the US Census Bureau Current Population Survey March Supplement 2000, 11.8 per cent of the US population was living in poverty in 1999. About one fifth or 1.2 billion people in the world survive on less than US\$1 a day, 44 per cent of these live in South Asia and 23 per cent in East Asia and Pacific. Many are living in informal housing, without security of tenure, and in deplorable housing conditions that can be described as life and health threatening (Roebuck, 1999; UNCHS, 2001).

By contrast, there are fewer homeless people in Singapore. The lowest income citizens are not excluded from the housing system. Data from the public housing authority, the Singapore Housing and Development Board (HDB), showed that as of Dec 2004, 37,823 households could not afford to buy their own flats or rent homes in the open market and occupied heavily subsidized 1- and 2-room public rental

flats under the Public Rental Scheme. Through the HDB set up in 1960, housing is provided under the government's shelter for all policy. Over time, poor quality overcrowded housing and temporary mass self-help housing in unimproved squatter settlements has been progressively cleared and replaced by high-rise accommodations and improved facilities in public housing estates and new towns. In the process, the public housing sector has grown to become the predominant housing sector and stock of affordable housing in Singapore. This has encouraged the formulation of policies aimed at reducing the cost of housing and easing access to owner occupation in public housing, even for the lower income residents.

The proportion of the resident population living in public housing has risen to 85% (since 1985), with the majority (95%, or nearly 3 million people) owning the flat they occupy. As the Minister for Trade and Industry has announced in the 2000 Parliament session, many families in the poorest 10 per cent of Singapore households have significant wealth in the form of their flats and compare well with those in other countries. The government's commitment to subsidize the three basic services of housing, education and health care to make them affordable was reiterated by the Prime Minister in his 2001 National Day rally speech, "No Singaporeans should be denied these basic needs, he said, no matter how poor he is." (*The Straits Times*, 21 Aug 2001). The state commitment is a key cornerstone of the Singapore housing intervention.

Government Attitudes and Responses

To understand Singapore's housing for all policy development, it is perhaps relevant to briefly review the social and urban development context that gave impetus to the policy. As with many other cities, as the Singapore city grew in population, the pressure on housing increased (Table 1).

Table 1: Population and building density in early Singapore

Year	Population (city)	Dwellings	Building density (persons per building)
1907	250,000	20,000	12.5
1931	567,000	37,000	15.3
1947	938,000 (700,000)	38,500	18.2

Source: Colony of Singapore, Report of the Housing Committee 1947; Master Plan 1955.

The combination of low construction and war damage had resulted in a substantial housing shortage in the immediate post-war years. According to the 1947 British colonial government Housing Committee Report, by 1947, Singapore had one of the world's worst slums, 'a disgrace to a civilised community' (p. 16). About 300,000 people were then living in temporary squalid dwellings in squatter areas with no sanitation, water or any of the basic health facilities and another 250,000 in ramshackle shophouses within the city area, in neighborhoods such as Chinatown 'in which gross overcrowding was common' (HDB, 1966, p30). To give just one example, as Mr. Lim Kim San, the first HDB Chairman recalled of his visit to Chinatown in the early 1960s,

I went into a three-story shophouse with one lavatory and two bathrooms. We counted 200 tenants living there. It was so dark and damp. It was an inhuman and degrading existence. Underneath the staircase was a single plank. A man was lying on the plank. He had rented it. That was his home! And he was lying down covered by a blanket; the thick red blanket made in China. I paused to ask him if he was sick: "Why are you covering yourself with a thick blanket?" He replied: "I am covering myself out of respect for you. I am wearing only undershorts. My brother is wearing my pants." They were too poor to afford clothing. In those days, there were shops which pulled clothing and shoes off the dead to sell them. "My God," I thought to myself, "I really must help those people." (*The Straits Times*, 9 Aug 1997)

At night, many others would sleep on makeshift canvas beds placed along street pavements (Chen, 1983). Policy interventions on housing provision during the colonial administration, 1819-1959 (Singapore was granted internal self-rule in 1959 and independence in 1965) were, however, limited. Resources were largely directed to entrepot trading and the British military complex. The housing problem was regarded as something of a transitory phenomenon that would disappear as the economy grew. Such an attitude was convenient as it provided the basis for taking little or no action on housing. In effect, the outcome was housing stress and the cumulative need for improvements was immense: in 1959, the total number of dwellings completed by both public and private agencies was 4003 when 14,000 new units were needed as summarized in Table 2.

Table 2: Housing need

New housing required	No. of units
for current housing deficit from overcrowding in urban areas	80,000
for central area redevelopment	20,000
for natural increase in population	47,000
Total new housing units required	147,000
	(14,000 new homes a year)

Source: HDB, 1966

Of the 14,000 new homes a year, the private sector had the capacity to provide some 2,500 new homes a year. Many of those dwellings would however be at price levels beyond the means of the lower income households. In the absence of alternatives, the burden of the remaining housing requirements including shelter for the poor must fall on the government. The challenge was taken up by the newly elected self-government, which had won the election on a manifesto of providing employment and housing (and has been re-elected to power ever since). Unlike many other Third World governments, which have tended to act on housing as a social problem to be addressed after the achievement of economic progress, Singapore considered the two as of equal and symbiotic importance. Two statutory agencies, the Economic Development Board (EDB) and HDB were immediately set up with reformed financial, legal, and institutional framework to promote the supply of economic growth-employment and housing respectively at the start of self-governance. The complementary between employment and housing has been extensively argued elsewhere to be an important factor in the government's continued political performance and legitimacy (see, for example, Chua, 1997; Ho, 2000).

The core objective of the public sector housing initiative is to make housing affordable and accessible to lower-income families, which until then suffered from discriminatory actions. As elaborated by the Minister for National Development in 1959,

Most of the houses will accommodate those in the lower income group, who have never been cared for in the past. The previous Government cared only for the middle class group, who can afford to pay tea money to get S.I.T. (Singapore Improvement Trust [the colonial administration housing authority]) flats. (*The Straits Times*, 19 Sep 1959)

Rejecting the popular but incremental construction of assisted self-help in low income housing, Singapore launched a comprehensive development of public housing. Following from the view that the state bears a major responsibility for organizing the conditions of growth, the government has taken a major role in determining the production and consumption of housing – in particular, by providing affordable and inclusive housing to the lowest income residents and, thus, demonstrating that often the determination to realize a political vision breaks down barriers to action and starts the path to real housing reform on the ground.

Affordable and Inclusive Housing

Central to public shelter provision is the pro-poor goal to maximize the housing options of poor Singapore residents while guarding against exclusion, exploitation, and unsanitary living conditions. Of significance was the crystallization of two basic functions of the HDB that have set the context for adequate housing delivery and changes in housing conditions for the poor:

- provide housing of sound construction and good design for the lower income groups at rents which they can afford (HDB Annual Report, 1962); and
- encourage a property-owning democracy in Singapore and to enable Singapore citizens in the lower middle income group to own their own homes (HDB Annual Report 1964).

The first follows a traditional philosophy: the state as a provider of housing. The second strengthens homeownership and opens the possibility for the state to assume the role of facilitator and social engineer. The following illustrates how these functions have been supported by various housing policies and diverse interventions to allow the poor to select the housing type and support that is most appropriate to them. As Mitlin (2001), Rachelis (1999) and many others remind, the urban poor differs in background and needs. Thus, different groups with multiple needs fall within this income category.

Good Affordable Housing

Based on the government's commitment to achieve adequate shelter for all who lack, the policy on good housing includes interventions along two broad dimensions: 1) physical, in terms of occupancy and minimum physical requirements for housing units to improve living condition within the overall urban development of the country and 2) financial, to enable housing access and affordability.

Physical improvement

Fundamental to the housing improvement and upgrading is provision of quality self-contained flats within a functional and landscaped residential environment. At the heart of that policy are the multiple interventions for comprehensively planned housing estates and, since 1965, new towns with improved services and facilities. For each of the facilities, planning standards have been developed to ensure that a quality service environment is achieved within a general framework of growth and modernization. The trend is towards self-containment of public housing towns where household members - especially the low income - can fulfil most of their basic needs within the new town: work, shop, school, entertainment, sports and other recreational pursuits. Development in the main is based on comprehensiveness in housing.

Comprehensive approach. As the national housing authority, the HDB adopts a comprehensive approach to secure sectorwide public housing development within the country's economic and urban development framework. In strengthening effectiveness, the HDB master plans, develops^[3] and manages (latter until the formation of town councils in 1989) the entire production-consumption process of public housing towns and all their dwelling units and infrastructure. The construction of housing and infrastructure is contracted to the private sector. By centralizing its public housing effort under a single authority, Singapore has circumvented the common problems of duplication and fragmentation of duties, and bureaucratic rivalries associated with multi-agency implementation. Even though increasingly advocated by some housing scholars (see review in Pugh, 2001), centralized comprehensiveness has its challenges.

For example, in the area of housing supply, to build cheap and fast, a strategy of standardization by building prototype flats and blocks was adopted. In addition, the HDB uses long-term supply contracts and bulk purchase strategies to ensure continuous supply of essential building materials at steady prices. While these pragmatic development interventions may have facilitated the rapid construction of the dwelling units and towns, standardization of building blocks had led to criticisms of cookie-cutter, monotonous townscapes of many of the early public housing town development (see Wong and Yeh,

1985; Yuen et al, 1999). Shoddy workmanship and building defects were a problem in several of the early quickly-built projects that attracted many complaints, even debate in Parliament (e.g. cracks in walls and ceilings, inferior fittings, frequent lift breakdown). Learning, modifying and innovating, the problems were quickly rectified and reforms introduced into the next cycle of construction improvement. Quality considerations were given more emphasis with the decline in housing shortage.

Under the country's recent quest for a distinctive city in the global age, attempts have been increasingly made to enhance the place identity of the towns and neighbourhoods (see Yuen, 2005). In support the HDB has devolved its estate management function to town councils comprising residents. Through the town councils, residents can get involved in the management of their towns. Experiences to date have shown that the reform of centralized comprehensive low-income housing is anything but regularized and static. It requires a dynamic problem-solving capacity, a continual process of learning and improving housing policies, and diverse interventions in order to affect significantly the target families.

Infrastructure. In the effort to provide not simply housing but good living conditions with a full complement of services, Singapore new towns have taken the form of high-rise, high-density development. Occupying an approximate land area of 650 ha, a new town typically accommodates a population of 250,000. The resulting new town density (gross) is 92 dwelling units per hectare where about half of the land is for residential development and the balance for facilities to support an improved housing environment (Table 3).

Table 3: Land use distribution and gross density of new town

land use	prototype new town (60,000 dwelling units)	
	land area (ha)	percentage
commercial (town centre and neighborhood centre)*	30	4.6
residential**	347	53.4
schools	62	9.5
open space	26	4.0
sports complex	7	1.1
institutions	15	2.3
industry***	44	6.8
major roads	89	13.7
utilities and others	30	4.6
total	650	100.0
gross new town density	92 dwelling units per hectare	

notes:

* includes civic, cultural, recreational uses and incidental developments in the town and neighborhood centers

** includes private housing within the town boundary

*** non-polluting industries only

Source: HDB (2000a)

The average height of most public housing apartment blocks is 12 stories with some, the more recent development, rising to 30-40 stories. The trend is towards taller buildings with increased population growth (the private sector has recently announced plans to construct 50-70 story apartment developments in the downtown area). The new towns are all carefully located and planned within the country's macro-spatial planning (see Yuen, 2004 for more detail). The principle of planned development is crucial in the provision of housing that is taking place over a length of time. It helps to regulate land and housing development to meet demand and infrastructure needs and, in particular, to ensure on-time infrastructure provision for residents who move into completed towns.

Land acquisition. The capstone in the provision of in-time infrastructure and housing is the state policy of compulsory land acquisition. The importance of such a land policy cannot be over-emphasized. In many

developing countries, the implementation of state housing has often been hampered by the shortage or unavailability of land. Without land, there would be no housing. The task of land assembly and clearance in housing development is clearly formidable even for the size of Singapore. To illustrate, in 1960, only 44 per cent of the land in Singapore was owned by the government while over 35 per cent of the population then lived in squatter settlements. Effective legislation was implemented to ensure the availability of unencumbered land to supplement the stock of state land.

In 1966, the colonial legislation on land acquisition was repealed and in its place the broader Land Acquisition Act was passed. Under the reformed Land Acquisition Act, the government can compulsorily acquire any land of private and commercial use for public interest. The Act provides for the payment of compensation, which is determined by the state. In determining the payment rate, no account is taken of any potential value for more intensive uses, only the existing use or zoned use is considered, whichever is lower. The prices paid by the HDB for the acquired lands are therefore usually much lower than the market price. This approach, described as draconian by some housing scholars (for example, Chua, 1997), has helped the government to lower the costs of housing provision and has been particularly helpful in the early phases of housing delivery. It has also furthered the dominant position of the state in Singapore's urban development — 85 per cent of land is now in state ownership (Motha and Yuen, 1999) — while contributing to a 'captive' market as public housing is offered as a resettlement benefit.

In providing a better housing environment than that from which the residents come, this policy helps enhance the attraction of relocation to public housing. As borne out by early resident surveys (1968 and 1973, see Yeh and Tan, 1974/75) on public housing tenants' present and past living conditions and more recent statistics on Singapore public housing residential mobility, there is a consistently high level of resident satisfaction with public housing living: 82.5 per cent of all households living in public housing have indicated that they would be content to always live in those flats (Housing and Development Board, 2000).

From its inception, public housing is seen as a way to provide a good living environment for income groups who cannot afford the cost of renting or buying private housing. This inclusive approach puts the needs, expectations and lifestyles of its residents at the center of the housing supply and has required the provision of better housing be a dynamic process that seeks continuous improvement to meet changing consumer preference. On a day-to-day basis, the HDB (and since 1989 the town councils) is concerned with estate management and maintenance to ensure that the public housing units and towns do not degenerate into slums over time.

On a longer-term basis, instead of allowing older flats and towns to become obsolete, public flats and estates are progressively upgraded with resident participation (Lau, 1998). To enhance affordability, public housing residents pay only a small fraction of the upgrading cost and at times not at all, depending on the scheme they elect. On average, about 10-13 per cent of HDB annual operating expenditure is spent on flat upgrading and improvements. In 2003/04, 13 per cent (S\$565 million) was spent on upgrading and improvement works (HDB Annual Report, 2003/04). The spending is justified by the Minister of Finance as a means of redistributing economic growth and government budget surpluses to increase the housing assets of Singapore citizens (*The Straits Times*, 9 Aug 1995). Apart from maintaining quality living, improvement of older homes also offers a sustainable building alternative to demolition that allows the residents to continue to live in familiar towns and build communities. All these are important factors in the consistently high public-housing resident satisfaction scores. There have been a number of studies concluding that Singapore public housing improvement has over the years become comparable to middle class housing and gained international housing awards including the UN Habitat World Habitat Award for 'innovative and successful human settlement' (Teo and Phillips, 1989; Foo, 2001).

Financial assistance

Improved housing is only relevant to the poor if it is also affordable. As Stone (1993) argues, affordable housing cannot be produced without consideration of the broader context of the households' earning

power. The Singapore response is an inclusive housing delivery system that recognizes the needs of varying income and family size. From the start of the program, the emphasis is on expansion of choice: not one but a range of flat types roughly in the proportion of 30 per cent 1-room units, 40 per cent 2-room units and 30 per cent 3-room units were offered. Care was taken that the exercise of housing choice did not exclude lower-income families. This consideration is central to the system's success. It has resulted in pragmatic strategies that are inclusive. In the area of affordable housing, the strategy, was, as Teh, the Chief Architect of HDB, explained, the building of small flats to be let at low rents,

While it is generally considered that a two room flat should be the ideal minimum standard for public housing, because of economic reality that a lower income working class family is unable to afford a two room flat which costs S\$40 rental per month, the one room flat at S\$20 per month rental was introduced as the minimum standard of public housing for the lowest income group in Singapore...It is hoped that when the economic position of the people improves, the occupants of these one room flats may eventually move to the two or three room flats. (Teh, 1961, 7)

A 1955 survey of housing applicants had revealed that 2,655 of 7,388 (35.9 per cent) applicants on the SIT housing register were ready to pay more than S\$40 a month for rental. An important factor was therefore the tenant's ability to pay. As a large proportion of the population was then lacking in adequate means to meet their needs for housing and other daily sustenance, provision was made to match affordability and to forgo the principle of charging economic rent. Instead, the policy was for low rent. In the 1960s, rents were at S\$20 per month, S\$40 per month and S\$60 per month for the 1-, 2- and 3-room flats respectively (no more than 15 per cent of the average wage-earner's monthly income). The building costs of flats were S\$3,000 each for 1-room unit and S\$4,500-5,500 each for 2-room unit (the average building cost of the flat was about S\$8 per square foot of net floor area, excluding public access and staircases).

The low rent is a 'deliberate policy of the government to improve the standard of living of the people' (HDB Annual Report 1969, p16). On social grounds, current rents have continued to remain low: S\$26-33 a month for 1-room flat and S\$44-75 a month for 2-room flat for households with monthly income of S\$800 or below, notwithstanding the increase in per capita GDP at current market prices, from S\$1306 in 1960 to S\$39,585 in 2000. The rental costs compare favorably with those provided by the US Department of Housing and Urban Development (1995): in 1991, 33 per cent of very low income renters in USA paid more than 50 per cent of their income on housing. Whilst the HDB maintains a low rent housing policy, parallel effort has been made to grow the economy and improve family income through education and employment including industrialization (Yuen, 1989). By the 1980s, Singapore had joined the ranks of Hong Kong, South Korea and Taiwan to become one of four newly industrializing countries in Asia. Its per capita income has increased to become the second highest in Asia after that of Japan.

Over time, with economic growth and elimination of the housing shortage, bigger housing units have been built. However, price-access to rental (and homeownership) remains important in meeting the housing needs of the poor and is very much guided by affordability. As explained by the Minister for National Development, 'When we price our flats, we don't just price them based on our costs. We price them with an eye on the affordability for those who are purchasing them, and we try to keep that level of affordability the same over the years.' (*The Straits Times*, 12 July 1996). The government has announced that it would set the price of 4-room flats to the affordability level of 70 per cent of Singaporean households while the price of 3-room flats will remain affordable to 90 per cent of households. It has also been stated that should incomes not increase neither would the costs of 3- and 4-room HDB flats (*The Straits Times*, 21 Sep 1996). No one is discriminated or excluded from housing on grounds of affordability.

To further illustrate this commitment, to make them affordable, the selling prices of flats are equivalent to about 2 years' income of the purchasers. To help the lower income, flats are sold at discounted prices. Smaller flats are subsidized more than the larger flats. According to a report in the local newspaper (*The Straits Times*, 30 May 1980), each 3-room flat is subsidized by 44 per cent, each 4-room flat by 33 per cent and each 5-room flat by 27 per cent. Most Singaporeans (87 per cent of 523 adult Singaporeans) polled in the 1997 *Straits Times* opinion survey indicated that they were happy with public housing; 55 per cent said the subsidy levels for public housing are just right. Almost all (99 per cent) favored giving subsidies to buyers

of 1- or 2-room flats (*The Straits Times*, 27 Sep 1997), lending support to the pro-poor goal of helping the lower income groups.

Subsidy is a central issue in the housing for the poor policy and has been argued by various housing scholars (see, for example, Daniere and Takahashi, 1999). Since housing is regarded as a public duty, not a commercial operation, and the government's core policy is one of providing homes for the people at rents they can afford, the difference between rent income and expenditure is covered by a grant from the state. The annual housing deficits are fully covered by government subsidies and the HDB starts each financial year with a clean slate. When it took office, the government had reserves of S\$322 million from which it could and did draw for housing and other key urban developments. Between 1960 and 1964, the government advanced S\$17 million in grants. In 2004, the cumulative grant since HDB inception in 1960 stands at S\$13,109 million. The amount stands witness to what Teh (1975) has observed, 'there has never been a single instance where the request for funds for the public housing programs has not been approved by the Government' (p10). This substantial financial support represents a major commitment by the government and is an important aspect of the Singapore housing policy to improve the living condition of the lower income families.

Security of Tenure Through Homeownership

The second major driver of Singapore's public housing development is safety of secure tenure through the option of homeownership. Although begun as rented housing, homeownership of public housing is encouraged as a policy since 1964 to 'enable Singapore citizens in the lower middle income group to own their own homes' (HDB Annual Report 1964, p9). The Report went on to state, 'Without this scheme the majority of wage-earners in this income group will not be able to buy their own homes because of the prevailing high prices.' (pp9-10) Aimed at preventing discrimination in housing, promoting security of tenure and promoting access to finance for affordable housing, this policy is instrumental in facilitating the participation of lower income households in homeownership in Singapore. The core instruments include a transparent flat allocation system and the homeownership scheme aimed at making homeownership more affordable by increasing popular access to mortgage finance.

Flat allocation system

Flat allocation policy is an important part of housing access. Right from the start, transparency of flat allocation and eligibility is an institutionalized aspect of the public housing system that takes pride in non-discriminatory action. As Chong et al (1985, p. 230) explain,

A major challenge of the HDB lies in the desire to devise the right schemes and policies that will ultimately place, in the hands of the deserving public housing applicants, the keys to their new homes. The need for rigorously formulated schemes and policies arises from four factors often associated with a good public housing program. Firstly, there must be equity so that public resources ploughed into the housing program are fairly distributed; thus, the need for rules and procedures to determine who gets a flat at which point in time. Second, it should benefit the majority of the population and thus involves the processing of large numbers. This calls for strict procedures to maintain efficiency, reduce errors and prevent abuse. Thirdly, it should offer some degree of choice in the location and type of public housing...and finally, the existence of special groups requiring priority or special assistance in obtaining public housing complicates the task of maintaining equity at the broader level.

Eligibility conditions and the flat allocation process are clearly set out and made public. Flats are allocated on the basis of need, families before singles, on a first registration basis (Tan, 1998). Through various allocation priorities, the state has promoted the values of the family institution (for example, to encourage early marriage and married couples to live close to their ageing parents). Applicants can 'walk in' to select flats from existing housing stock or wait for their appointed flats to be built on a build-to-order scheme. To help guard against exclusion and exploitation, the HDB maintains a detailed applications list that indicates

the particulars of all applicants, the type of flat applied for and the geographical zone desired (Liu, 1988). The applications list serves a further function of providing the HDB with the means to better match housing demand with supply.

All Singapore citizens who do not already own homes and whose combined monthly household income falls below a specified ceiling are eligible to rent/buy HDB flats. Income ceiling is imposed on applicants of public housing to serve as a cut-off point to determine the group who is eligible for HDB flats since such housing is primarily designed to help those who cannot afford private housing. Applicants whose total household income exceeds the eligibility ceiling would thus not qualify for public housing. This is an important intervention to help low income families. Without income ceiling, higher income families may competitively raid low income housing resulting in ever under-supply situation for the poor as outlined by Pugh (2001). Table 5 gives one illustration of the prevailing eligibility conditions.

Table 5: Eligibility conditions for rental/purchase of HDB flats

Flat Type	Average Floor Area (Sq M)	Public Scheme	
		Rent (S\$)	Eligibility Conditions
1-room	33	26-33	<ul style="list-style-type: none"> • Singapore citizens • at least 21 years of age • total household income not more than S\$800 per month • must form a family nucleus • must not own other property
2-room	45	44-75	
buying a flat direct from the HDB			<ul style="list-style-type: none"> • Singapore citizen • at least 21 years of age • have a family nucleus • total household income not more than S\$8000 per month • must not own any private residential property • have not bought any flat direct from HDB nor enjoyed any housing subsidy

Source: HDB (2000a)

As with many other aspects of the housing delivery system, to be effective, the implementation of eligibility criteria is contingent upon regular review and adjustment. First, its effectiveness is affected by the setting of the income ceiling at an appropriate level, that it would include the intended target group without an unmanageable influx to the applications register and consequential very long waiting list. Second, the setting of the income ceiling is not a 'one-time' exercise. As with the good housing process, the income ceiling has to be constantly reviewed in the context of changing income levels, prices of private housing and the HDB ability to extend its programs. The eligibility income ceiling for homeownership has been periodically revised (from S\$1000 a month in 1964 to S\$8000 in 1996 and since) in step with economic growth to include 90 per cent of households in the community in the nation-building objective of providing housing to all who lack.

An input to the large inclusion is the housing need of the sandwich middle income class whose income is beyond public housing income ceiling and yet not sufficient to enter private housing. The bottom line is to create equal housing opportunity for all citizens and reduce the potential for socioeconomic polarization. Yet, there remains the homeless sleeping on public benches at night, albeit a small number compared to other cities. Their presence has cast reconsideration on the social exclusion of specific groups (such as the destitute) within an increasingly middle class society. Has this group of the poor been neglected in the shelter for all program as it widens to provide 'universal service' and promote ownership among a broader segment

of the population? As one homeless (an odd job laborer in his 40s, an ex-convict whose family does not want to house him) shared in a newspaper interview, "Flats are very expensive, aren't they? A few thousand bucks?" (*Streets* 25 Jul 2003). As Angel (2000) reminds, a fundamental explanation for homelessness is economics—the urban housing supply has a minimum price associated with it. The reemergence of homelessness is a housing policy issue that warrants further research.

Homeownership scheme

Notwithstanding that homeownership rates are generally found to be highly dependent on income, age, marital status, family size and race (Carliner, 1974), Singapore has broadened homeownership and made it a reality to many low-income families. Under the homeownership scheme first introduced in 1964, public housing is sold to eligible households on a 99-year leasehold basis. The rationale for promoting homeownership may be glimpsed from the memoirs of then Prime Minister (Lee, 2000, pp116-7),

My primary preoccupation was to give every citizen a stake in the country and its future. I wanted a homeownership society. I had seen the contrast between the blocks of low-cost rental flats, badly misused and poorly maintained, and those of house-proud owners, and was convinced that if every family owned its home, the country would be more stable...I had seen how voters in capital cities always tended to vote against the government of the day and was determined that our householders should become homeowners, otherwise we would not have political stability. My other important motive was to give all parents whose sons would have to do national service a stake in the Singapore their sons had to defend. If the soldier's family did not own their home, he would soon conclude he would be fighting to protect the properties of the wealthy. I believed this sense of ownership was vital for our new society which had no deep roots in a common historical experience.

To happen, homeownership requires affordable housing credit. Mortgage lending has to reconcile affordability to borrowers, viability to lenders and resource mobilization for the housing sector. The policy and interventions developed are those attempting to cheapen the costs of public homeownership through pecuniary assistance with down payment and mortgage interest payments. The aim is to ease front end loading and mortgage financing problems for the potential purchasers so as to encourage renters including lower income families into owner occupation. To give one recent example of the help to lower income households to buy their first HDB flat or upgrade to a bigger flat when the family grows, the Special Housing Assistance Program introduced in 1994 offers the families,

- sale of flats to sitting tenants at a discount with 100 per cent financing;
- HDB buys back 3-room flats from the open market to sell at subsidized prices to families with monthly household income of less than S\$1500 (the subsidy is about S\$50,000 for each 3-room flat);
- sale of budget 4-room flats with slightly smaller floor area and simpler finishes (budget flats constitute about 10 per cent of total number of HDB flats offered for sale annually);
- tenants applying for 4-room flats under the Registration of Flats System are given a 6-month head start over non-tenant applicants in getting their flats. They must be first-time home buyers and have stayed in their rental for at least 5 years;
- rent and purchase scheme will allow families with a gross monthly household income of between S\$800 and S\$1500 to first rent a 3-room flat from the HDB and subsequently purchase the flat.

Within three years of its introduction, about 16,000 families had availed the program. To further assist the low-income families, as of 1994, the government has given S\$30,000 grant to households of four with a monthly household income of less than S\$1500 towards their purchase of a subsidized 3-room flat. As with the provision of a range of housing types, the diverse interventions potentially allow the families to select the support that is most useful and appropriate to them.

The most enduring and significant assistance for homeowners is perhaps the 1968 provision under the homeownership scheme, which allows buyers of public housing to withdraw a portion of their savings in the Central Provident Fund (CPF) for down payment (20 per cent of purchase price) and mortgage payment (the remaining 80 per cent of purchase price, which can be paid in installments through a HDB assisted mortgage loan with interest rates set below the prime rate). The CPF savings are essentially accumulated funds from the worker's pay-as-you-go social security scheme to which both employer and employee make mandatory contributions of a certain percentage of the employee's monthly contractual wage (Low and Aw, 1997). On average, the flat applicant who has worked for 4-5 years would be able to pay the 20 per cent down payment using their CPF savings, thus eliminating the burden on cash outlay.

The use of CPF savings for housing is an attractive financing solution as monthly mortgage repayment for the flat is generally less than half of the individual's CPF deposit (remaining CPF savings are left for retirement while the take-home pay remains intact for other consumption). According to HDB records, the majority of first-time house buyers could pay their monthly housing loan entirely from CPF savings without the need to use their take-home pay. In addition, the CPF Board administers a low premium mortgage reducing insurance scheme to protect the ownership interest of the owner's surviving family members in the event of death or incapacitation. Thus, with the use of CPF, it became possible to own a flat for a lease of 99 years without suffering a reduction in monthly disposable income. The working and impact of CPF on wealth generation has been much examined elsewhere (see Low and Aw, 1997; Chua, 1997).

In aggregate, this mechanism has generated a rapid expansion of homeownership and the broad spreading of tenure benefits to the lower income families. To quote the Trade and Industry Minister in Parliament on 29 June 2000, many in the bottom 10 per cent of households in Singapore have significant wealth in the form of CPF savings (*The Straits Times*, 30 June 2000). In 1999, the median CPF savings for the poorest 10 per cent of households in Singapore was S\$20,000. Thus, even though housing provision is dominated by the state, a high proportion of the public housing stock is under private ownership. The proportion of homeownership public flats had increased from 26 per cent in 1970 to 92 per cent of the housing stock by 1999 (HDB, 2000b).

According to a 1992 HDB survey of 1- and 2-room rental flats, 27 per cent of those tenants had expectation of becoming house owners on their own while another 25 per cent indicated that they would be encouraged by the provision of financial assistance to buy a flat. The popular attraction of homeownership may lie in deeper household aspirations articulated by some housing observers including Knight and Eakin (1998) as the 'American Dream' and in the Singapore context, the 'Singapore Dream' (Koh and Ooi, 1996). The remaining 47 per cent of households that intended to stay on in rented flats gave reasons of affordability, small household requirements and satisfaction with their present flats as the main pull factors. To ensure that members of the lower-income groups have continued access to public housing and are not made worse off by changes in the wider macroeconomic environment, the families who cannot afford to pay for the housing are offered assistance.

The public housing legislation provides for the forfeiture (or repossession in cases of non-payment of mortgage installments) of a flat when the rental is in arrears for 3 months or more but there are few cases of forfeiture/repossession because of arrears. As the only sector of affordable housing, any eviction would leave the family homeless. Rental and mortgage arrears are part of the realities of providing affordable housing in a shelter-for-all housing policy, a management problem that may escalate in times of economic difficulties. To contain the problem, help is offered to families in financial difficulties, in terms of job search and rental assistance. During the recent 1998 Asian crisis, for example, assurance is given to public housing residents to help them ride out the crisis.

In Oct 2001, the government rolled out S\$11.3 billion package to help Singaporeans cope with the economic downturn. Of this, S\$698 million is specifically aimed at helping the poor and the unemployed. In the area of public housing, assistance is extended to service and conservancy charge rebates, reduction of utilities bills and rental assistance. Families unable to meet their mortgage payments may have their repayment scheme rescheduled or move to a flat within their financial ability. Mortgage loan reschedule schemes include:

- reduced repayment under which the homeowner can apply to defer 25 per cent of his/her monthly repayments for a 5-year term. On the 6th year, the monthly installment is recalculated based on the loan balance then and the remaining loan term;
- deferment of loan repayment where the homeowner can apply for deferment of his/her loan repayment for 6 months and if need be for a further 6 months;
- extension of loan term where the HDB will consider allowing an extension of the 25-year loan term up to a maximum of 30 years or until the homeowner turns 65 whichever is shorter (*The Sunday Times* 16 Dec 2001).

As the Minister for National Development assures, 'There's no question of anyone losing their flats because of this downturn' (*The Straits Times*, 21 July 2001). This position conveys the government's commitment to equal housing access rights.

Realization of Housing Rights

The first, and perhaps most immediate, effect of the realization process is improved housing for the families. Instead of shared and unhygienic accommodation, families can look forward to unique occupation, equal access to housing and for many, homeownership. The realization process brings improved housing conditions for the housing poor, manifested in better housing, security of tenure and improved quality of life. Comparative statistics reveal a progressive improvement in housing conditions: living space per person has increased from under 3-6 square meters per person in slums and squatter settlements (Yeh and Lee, 1968) to the current average of 20-25 square meters of living space per person (Urban Redevelopment Authority, 1991). As revealed by the Singapore Census of Population 2000b, the average number of rooms per person has increased to 1.29 in 2000. Other signs of housing and quality of life improvement among HDB households include:

- The proportion of population staying in 1-room and 2-room flats declined from 13.3 per cent in 1987 to 6.6 per cent, while those staying in 5-room and bigger flats increased from 12.3 per cent to 18.3 per cent. More than one in three (36.9 per cent) of Singaporeans who were living in public housing rental flats have upgraded to better housing between 1991 and 1995.
- The overall mean household income of households living in public housing estates increased from S\$1,558 in 1987 to S\$2,653 in 1993.
- More than 97 per cent of all HDB households have refrigerators, TV sets and telephones. More than two-thirds have washing machines, video recorders and water heaters. About 50 per cent owned personal computers. (HDB, 2000b)

In a recent time-use study of public housing households to analyze residents' daily pattern of activities within the flat, we found the largest block of family time (after removing work and sleeping time) is expressive time (defined as time for leisure and self-actualization) and the primary activity is watching television (Appold and Yuen, 2003).

Housing access and affordability including homeownership is no longer the exclusivity of upper and middle income families. Of the 21,300 households that upgraded from rental flats, 41 per cent of 1-room renters and 28 per cent of 2-room renters upgraded to either bigger rental or owner occupied flats (Department of Statistics, 1995). Among the different major ethnic groups (Chinese 76.8 per cent, Malays 13.9 per cent and Indians 7.9 per cent in national population), the Malays have moved forward to register the highest homeownership among all ethnic groups in public housing in the latest population census (Singapore Census of Population, 2000b). Data from the Singapore Department of Statistics confirm the public homeownership sector as the leading housing sector in Singapore, accommodating over 80 percent of total households from low income to middle income groups. The very low-income group (bottom 5 per cent of income groups) is accommodated by the public rental sector. Less than 0.1 per cent of the squatter settlements remain to be cleared. Even these settlements have been improved with paved

roads and basic modern services. Compared to other cities, there are few homeless people on the streets. Occurring in parallel is the economic development that has significantly raised income and saw unemployment decline from double-digit in the 1960s to full employment in 1970s-1980s and 4 per cent in recent years with recession. In public housing, the mean number of income earners per household is 1.7 persons and income has risen over the years with the general economic performance (HDB, 2000c). The poor have become less poor. They are squatters no more.

While public housing has solved severe problems of housing shortage and overcrowding, it has in the process transformed the Singapore landscape from a predominantly low-rise shophouse colonial city to a modern city of high-rise, high-density living. The transformation has brought certain adjustments and concerns that are in part the realities of high-rise living. High-rise public housing has often been viewed with problems in many western cities (see Conway and Adams, 1977; Helleman and Wassenberg, 2004). In Latin America, Venezuela has initiated high-rise redevelopment in the 1950s but failed by reason of excessive costs and social shortcomings as reviewed by Pugh (2001). In Asia, Singapore and Hong Kong have similarly experimented and scored high residential satisfaction. Developments worldwide would seem to indicate that many other cities are revisiting and building high-rise (some by private sector in up-market districts) to house the growing population. What are the attractions and concerns of high-rise living? Will public housing residents consider living ever higher as urban realities push towards taller buildings? We have initiated research in an attempt to investigate these issues to better understand the living experience of public housing residents in high-rise (Yuen et al, 2003). The emergent promising lines of our enquiry in reasserting the importance of people-centered planning are beginning to lend support to the latest British premise that tall buildings can have a positive role in urban development if carefully considered (Corporation of London, 2002).

Our evidence reveals that as building height extends continually skywards, more households in Singapore are living (and preferring) higher floors now than 30 years ago, indicating that if conditions are suitably included high-rise may yet provide a satisfying living experience (Yuen, 2005). The majority of public households (54 per cent) were living on ground to 4th story in 1973, the tallest public housing block then was 20-story (HDB Household Sample Survey, 1973). The highest most preferred floor in 1973 was ground to 4th story. In another more recent survey where 48.5 per cent of those interviewed (344) were living on 15th-30th floor (the present tallest public housing block is 30-story), more people were apparently expressing a preference for higher floors — 29 per cent stating 15th to 20th floor as their highest preferred floor and 52.9 per cent for above 20th floor (Yuen, 2005). Other recent work has supported a similar preference trend (Tan, 2002). It would appear that as more people become used to high-rise living, more are seemingly confident and willing to live higher.

Taking a closer look, the three common items that seemed to have consistently attracted Singapore public housing resident respondents to live high-rise are the view, breeze and privacy they can get in high-rise living — ‘top of the world’ feeling. Among the worries, others have cited considerations of safety, in particular, height phobia, safety of children and elderly, ‘scared if the lifts are broken’, or ‘scared if a crime occurs in high floor’ as reasons for not wanting to live on high floors (Yuen, 2005). The importance of lift provision in high-rise living and preference has appeared in other studies (Tan, 2002; Chew, 2004/05). Just as personal inclinations may be a motivating factor, personal fears, real or perceived, would appear to detract from the high-rise experience. As summarized in Table 6, it would appear that the very high and very low floor levels were not particularly favored by most residents if the recent survey among resident respondents is any indication.

Table 6: Highest floor in which survey respondents were willing to live

Highest floor	No. of respondents (%)
1-5	0.9
6-10	11.3
11-15	12.5
16-20	22.4
21-25	12.2
26-30	25.9
31-50	13.1
Higher than 50	1.7

Note: % only includes valid responses to this question: 344.

While many may be willing to live on the 16th to 30th floor, less than 2 per cent were willing to live higher than 50-story. One respondent shared that she would be too afraid to hang her clothes out if it was too high (the local practice is to hang the clothes on long bamboos out of the kitchen window to take advantage of the tropical sun). Others related incidents of persons falling off while cleaning their windows (cases reported in the local press and media were mentioned) and were thus not comfortable to be living too high. The reality is that while many look forward to improved housing and view with height, there will be others who will express concerns over the spatial constraints that come with high-rise. In the dimension of height, as one resident shared in a recent press interview,

It was quite scary at first to look down. I didn't want to live so high up — on the 10th floor — but what to do? We'd already picked this flat in the ballot (*The Straits Times*, 9 Aug 2001).

The worry will only intensify with population growth and plans to build taller housing in both the public and private sector, underscoring the need to take greater cognizance of the concerns of the residents in the planning and design of high-rise living for some such as the poor may not have the option to choose. Even as further work remains, it would appear that respondents' acceptance level of living higher is seemingly restricted to their perception. As one respondent shared with us, she was previously afraid of living on high floors but no longer after she visited a friend living on the high floor and found that the height was acceptable. The absence of living experience does not shut the possibility that when taller buildings are built and more people move to live in them, resident perception and preference may change accordingly.

As Mr Othman (aged 65) who moved from village to high-rise living in 1971 recalled, the initial adjustment to vertical living was difficult. Among others, he had to study the habits and cultures of other races (unlike village living which was largely mono-ethnic, different races live in public housing under Singapore's shelter for all policy), 'Living with many races, we have to cooperate and be understanding.' (HDB, 2000d, p. 151). Following early concern of decreasing patterns of neighborly interaction in public housing, recent HDB sample household surveys indicate improvement in neighborly interaction among the residents. Its latest 2003 survey found that 97 per cent of residents polled said they know their neighbors while 90 per cent would greet their neighbors and 80 per cent would regularly have conversation with other residents in their neighborhoods (*The Straits Times*, 23 Feb 2005). Older residents especially those aged 60-69 with longer length of stay, seemed the most active in community relations. They meet along corridors and lift lobbies of the apartment block and at ground level open spaces of void decks, markets and neighborhood parks. Resident interaction need not be limited in high-rise.

Each group has apparently developed his/her coping mechanism with high-rise. The farmers, for example, who were among the first generation of residents resettled from village to high-rise public housing developed their own coping mechanism to the new spatial constraint as recounted by then Prime Minister (2000, p120),

Some were seen coaxing their pigs up the stairs! One family, a couple with 12 children, moving from a hut to a new HDB flat at Old Airport Road brought a dozen chickens and ducks to rear in the kitchen. The mother built a wooden gate at the kitchen entrance to stop them from entering the living-room. In the evenings the children would look for earthworms and insects at the grass patches outside for feed. They did this for 10 years until they moved into another flat.

Spatial constraint is a significant problem in modern urban living. Some such as Singer (1991) have persuasively argued that with the quickening pace of urbanization there is a tendency for modernity to replace tradition. Old ways gradually adapt to new form as society moves along the continuum of *gemeinschaft* and *gesellschaft*. Others such as Cooperman, et al (1981) astutely observe an element of self-selection in housing as people are likely to choose the living situation they prefer since the home is the most important physical setting for many of us. A number of other studies by Michelson (1977) and Cooper-Marcus (1995; 1999) have shown that specific kinds of people with pre-existing behavior are attracted to particular residential milieus. Cooper-Marcus (1995), for example, has described the 'house as a mirror of self' in her exploration of the deeper meanings and relationships to the residence. However, while this may be true for many, the poorer residents perhaps more than other residents may not have the option, and are most affected in situations of spatial constraint.

As of 1999/2000, 298,698 families have been resettled, more than half of those families relocated to public housing. The process of resettlement did not take place without problems. In an early sociological study, Hassan (1977) highlighted that for the poor families in the beginning, increasing household expenses and growing anxiety over such increases outweighs the advantages and facilities available in the new housing environment. As Lee (2000, p120) more recently shared,

There were enormous problems, especially in the early stages when we resettled farmers and others from almost rent-free wooded squatter huts with no water, power or modern sanitation, and therefore no utility bills, into high-rise dwellings with all these amenities but also a monthly bill to pay. It was a wrenching experience for them in personal, social and economic terms.

At times, the squatters would refuse to move and frustrate plans of redevelopment. To ease the resettlement process, the squatters were offered resettlement terms and encouraged to move, failing which action would be taken in the courts to obtain warrants for eviction. As one resident shared, the resettlement compensation was paid according to the size of the house to be demolished and other factors including the number of fruit trees and other improvement such as fish ponds and chicken houses on the land (HDB, 2000d). Eviction is the last measure and the resettlement policy is continually reviewed to provide a better deal in resettlement compensation so that "there will be no room left for pro-Communist elements to instigate the farmers and squatters against the Government" (*The Straits Times*, 7 Jan 1964). Despite the initial problems, housing scholars have variously observed the changing attitude of those affected by resettlement from resentment and resistance in the initial years of the public housing program to resignation and progressive acceptance because it has become evident that everyone in the squatter areas throughout Singapore is affected 'equally' and that land is needed for housing of the nation (Wong and Yeh, 1985; Chua, 1997). Along with the increased resettlement compensation, the comprehensively-planned new towns with improved infrastructure, utilities and housing offer the potential for homeownership and subsequent resale at market prices after a minimum occupation period (buyers must satisfy the public housing eligibility requirements for homeownership).

Conclusion

This paper has presented a perspective on Singapore housing policy for squatters and low-income families. It underscores that diverse interventions are important in housing for the poor as they allow these groups to select that which they consider most appropriate to their condition and need.

The housing problem of the urban poor, as Mitlin (2001) describes, is multi-faceted and may hold the key to improved development. As Angel (2000) further suggests, the housing problem can be broadly

characterized as the presence of a large number of urban families living in what society-at-large considers to be unacceptable housing conditions or simply put, bad housing conditions. Bad housing conditions often reflect the interaction of poverty and affordability as evidenced by the early Singapore housing situation of the 1960s. In the Singapore case, it has prompted the pursuit of adequate affordable public housing as the solution. Using comprehensive sector development of public housing as a vehicle, Singapore has distinguished those in need of shelter, assisting the poor while screening out those who could afford private housing at prices generally several times higher. Such intervention has sustained a functioning housing sector that has been translated into housing improvements internationally recognized by many (see Foo, 2001; Mitlin, 2001; Pugh, 2001).

In the process, it has worked to uplift the quality of life of the poor through increased access to housing including the creation of homeownership and a stake in society. Over 85 per cent of the resident population in Singapore is living in public housing, with the majority owning their homes, an opportunity that is not limited to those with higher and middle incomes. Many in the bottom 10 per cent of households in Singapore own their homes and have seen their incomes rise steadily in real terms. Such an achievement is not randomly produced but the result of much planning and determination on the part of the government.

In a fundamental perspective, without parallel economic development, the housing improvements would not have advanced so dramatically. Deliberate action was taken to diversify the economy and provide employment in Singapore. With economic growth, the nominal household income had increased. Real GDP had grown at an average of 8.6% per year over the 30-year period from 1965 to 1999. This had fuelled growth in real per capita GDP from S\$4000 in 1965 to S\$32,000 in 1999 (while inflation remained low, around 2 to 3% per year). At the household level, the average monthly household income increased. As Ng and Yap (2001) illustrated, from 1988 to 1998, average monthly household income had increased by 6.7% per year, leading to higher asset ownership. The proportion of homeownership public flats expanded from 26 per cent in 1970 to 92 per cent of the housing stock by 1999.

Although the Singapore challenges of affordable housing and shelter delivery are context specific, drawing on its development experience may yet show how the urban poor might be helped through housing delivery. Two chief observations are worth emphasizing. First is the degree of government commitment in helping the lower-income households. The extent to which the shelter needs of the poor can influence policy decisions will ultimately depend on the political environment within which such decisions are made. In general terms, government interventions can greatly motivate, enable and constrain housing action. To illustrate, from the outset, the Singapore government has recognized its role and accorded high priority and commitment in helping the lower income families to meet their housing needs. Diverse interventions are offered to these families to select as their needs require. They are considered important stakeholders in the new country. In all its policies, there is thus an implicit consciousness to ensure that lower-income families are not made worse off. For example, to make homeownership a reality for all, the government has introduced a homeownership scheme with an innovative self-help mortgage financial system drawn on the borrowers' CPF savings. The Singapore CPF for housing represents a lesson in housing finance.

At the same time, it demonstrates that eliminating the urban housing and poverty problems require a massive paradigm shift in thinking and acting towards the poor. Cities and societies need to envision them as assets and not problems. Like the rest of society, they should be able to select as their needs require. The positive implication of the Singapore housing program is that with commitment comes the will to change and to bring forth change. The determination to achieve change is translated into state commitment. The Prime Minister in his 2001 National Day rally reiterated the government's commitment to subsidize heavily the three basic services of housing, education and health care to make them affordable. "No Singaporeans should be denied these basic needs, he said, no matter how poor he is." (*The Straits Times*, 21 Aug 2001).

The second concluding observation concerns pragmatic program implementation. In Singapore, planning is quickly translated into housing policies and schemes. Priority is matched by resources and support (policy,

organizational, legal, and financial) aimed at establishing a framework that enables the lower-income families to select the appropriate assistance to meet their housing needs. Implementation is indeed the hard part of urban development. With every successful example, there are perhaps many more unsuccessful ones. Besides resources and supporting framework, the process requires constant review and learning. Through continuous learning and policy refinement, Singapore has gradually evolved and built an institutional capacity and housing system that ensures program delivery. Institutions need not be identical. Singapore's system of housing development with a single empowered authority responsible for housing delivery may not be the model for all countries, but effective pragmatic management principles (such as inclusive housing and widening homeownership opportunity for lower-income families, directed assistance for low-income renter households and continual review of housing access) apply in most contexts. There is a growing literature that emphasizes a comprehensive approach to housing (see, for example, Pugh, 2001).

Set alongside comprehensiveness in housing, as many housing scholars remind, housing delivery is not a stand-alone issue (see, for example, Chua, 1997; Pugh, 2001; Mitlin, 2001). Housing policies pursued in a vacuum from other social and economic policies have brought disastrous consequences in some cities (OECD, 1996). There is a strong connecting thread and interdependence between housing and overall macroeconomic and national development that shows housing as anything but a 'public burden' (see Wong and Yeh, 1985; Sandilands, 1992). National and economic development in Singapore has provided the *raison d'être* and resources for its low income housing development. Its pro-poor public housing projects are to a large extent enabled by the rising affluence that comes with economic growth, which has seen the country progress from a developing country in the 1960s to a newly industrializing country by the 1980s.

Although the financing of public housing draws from the general background of the country's economic progress, Singapore's experience also demonstrates the employment-generation potential of this sector. By 2000, the HDB in providing a total housing environment for all who lack has initiated the construction of more than 850,000 dwelling units, 19,500 commercial premises, 12,800 industrial premises, more than 1460 schools and community facilities, 45 parks, 17,347 markets/hawker centers, and numerous car parks. The construction of these facilities while providing improved housing and better quality of life for the poor has created construction jobs and has a high multiplier effect. Reflecting on the economic impact, some housing scholars such as Sandilands (1992) have described the construction sector as a leading sector since its growth rates are above the rate of growth of overall GDP. Others have written about the pump priming effect of public sector housing construction (see Krause et al, 1987).

As with many other cities, Singapore's quest to provide its poor residents with good living environment is not new. Adequate shelter with the promise of a decent life of dignity, good health, safety, happiness and hope is one theme that has been repeated internationally and enshrined in successive United Nations declarations (see, for example, UNCHS, 1998; 1999; World Bank, 1993). The Singapore development experience, however, shows that public housing (even high-rise) for the lower income families need not degenerate into polarized and marginal environments. Nonetheless, the reemergence of the homeless underscores the urgency for further research. In particular, the trend towards taller housing presents challenges. The poor of Singapore do not have the alternative to opt out of this housing. In this regard, we are reminded of Mitlin's (2001, p512) exhortation to understand and follow the realities of the poor in the continuing effort to create affordable housing that seek to address their diverse needs.

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^[1] There are 5 Community Development Councils (CDC) in Singapore. Each headed by an elected mayor, the CDC functions as a local administration of its district with main responsibility to initiate, plan and manage community programs to promote community bonding. The CDC also provides various community and social assistance to residents in need, services delegated from the Ministries.

^[2] Current exchange rate is approximately USD1 for S\$1.6.

^[3] In 2003, the HDB building and development arm was corporatized in the wake of the government's long-term development plan to increase private housing and 'roll back' public housing as the society matures economically.

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