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**Impact of Public Housing Upgrading on Residents**

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*Abstract*

The upgrading of HDB flats has a direct impact on residents in many ways. First, from the economic perspective, they have to make a financial commitment with the aim to enhance the value of their assets as a result of upgrading. Second, as the upgrading works are carried out with occupation, they will have to cope with the attendant problems and inconvenience of upgrading. And third, from the social and community perspective, upgrading provides the precinct and neighbourhood an opportunity to create an identity and improve the overall living environment. Given this impact, residents must play a direct and active role in the upgrading process. This paper discusses the impact of upgrading through residents' perception as well as the mechanisms, methods and management of resident participation in the upgrading projects. While upgrading and renewal are an important component of public housing, they need to be carried out with a complete understanding of residents' needs and perceptions, which may change over time.

*Key words: HDB upgrading, impact on residents, resident participation*

## Introduction

Upgrading of flats built by the Housing and Development Board (HDB) in Singapore has gained significance over the last decade as the majority of flats built in the 1960s, 70s and 80s have become less attractive when compared to the new HDB flats built since the 1990s. Given the terminability of the life cycle of buildings, upgrading has become imperative if these older flats are to be able to continue to provide the standard of living environment comparable to that being provided by the new flats. The Prime Minister of Singapore, Mr Goh Chok Tong, in his address at the HDB's 40<sup>th</sup> anniversary celebrations in 2000, said: "...even as we develop new towns, we must retain the vibrancy of our mature estates...to prevent these towns from becoming old folks homes, we must do more to retain and draw the young into them. We must ensure that these towns are able to support the lifestyle needs of younger families. This will strengthen inter-generational bonds, and give new life to these mature towns." (HDB, 2000) The objectives of upgrading are thus two-fold: firstly, to upgrade the older HDB precincts to bring them to the standard of the new HDB estates, and secondly, to enhance the value of the flats without uprooting residents from their familiar setting.

Upgrading is therefore an important part of the HDB's overall estate renewal strategy, which includes the Selective Enbloc Redevelopment Scheme (SERS), the Main Upgrading Programme (MUP), the Interim Upgrading Programme (IUP) and various other upgrading schemes. Beginning with the demonstration phase of the MUP introduced in 1990, more and more flats would have undergone one form of upgrading or another in the last ten years as well as in the years to come. Besides the significance of scale, the impact of upgrading is also underlined by two main factors. First, given that nearly all the HDB flats are sold to residents on 99-year leases, there are implications on the collective decision-making process as well as the issue of cost to the owners. And second, as the upgrading is carried out while the residents continue to live in their flats, it would affect the residents, not least in terms of the inconvenience to them during the construction.

This paper examines the impact of upgrading on the HDB residents from the economic, physical and social perspectives. The main focus is the surveys conducted on residents in a selected HDB neighbourhood with upgraded precincts. The paper is organized as follows. A selective review of past studies on housing upgrading is given after the introduction. This is then followed by a discussion of the impetus for the upgrading of HDB flats and a review of the current status. The findings of the survey on the impact of upgrading on residents as well as the importance of resident participation are then discussed. The paper then concludes with some key considerations and recommendations for future upgrading exercises, given that upgrading has become a significant aspect of the HDB's public housing agenda.

## Past Studies on Housing Upgrading

A selective review of past studies on housing upgrading shows that most studies are concerned with the upgrading of poor housing conditions, particularly the upgrading of housing slums in developing countries. Although these studies are of a different context to that of the HDB flats in Singapore, the kind and level of impact of upgrading are nevertheless similar and are therefore worth noting.

Van Rensburg *et al* (2001) undertook a comparative study of four surveys of the residents of Freedom Square in Bloemfontein, South Africa, relating to the social impact of upgrading and low-income initiatives within the community. Firstly, the upgrading projects resulted in the residents having a better quality of life by making their living conditions more healthy and giving them hope for the future. Secondly, the upgrading programme brought about ownership of sites which empowered their lives and also brought them freedom and independence. The authors note that the upgrading programme goes beyond the provision of a more secure and permanent milieu to contribute to the satisfaction of six human needs (subsistence, protection, affection, idleness, identity and freedom). On the economic perspective, Gilbert and Varley (1991) recognize that property values may increase significantly as a result of slum upgrading. Similarly, Crooke (1982) suggests that as a result of slum upgrading, the increased attractiveness of legal plots to non-residents may encourage owner occupiers to sell at a profit. However, this positive impact may change the household income composition of the area such that the upgrading benefits the higher income families than the original intended beneficiaries. Using the case study of a slum upgrading programme in Lusaka, Rikodi (1988) evaluates the impacts of upgrading of a squatter area. Most of these are positive in contributing to a better living environment. Contrary to Crooke, his findings suggest that upgrading does not appear to have led to the displacement of existing households by higher income groups.

Kleinhans (2003) examines the implication of housing stock restructuring programs in the Netherlands where the housing stock and the living environment is improved through demolition and upgrading of social rented housing and the construction of new owner-occupied dwellings. This policy has triggered major residential moves in and beyond some neighborhoods, partly involuntary. The paper compares and contrasts the social implications in two neighborhoods, Utrecht and Hague. It is found that in Hague, the residents who were displaced moved upwards in their career as a result of their improved housing situation while the unfulfilled promise of new construction in Utrecht caused much distress and complaints about the range of available relocation options among those displaced. The negative effects of demolition and relocation on neighborhood social ties were limited in the two case studies as firstly, many of those who were displaced considered local social ties as unimportant and secondly, most still remained in the same neighborhood. However at the personal level, forced relocation causes much distress and upsets the personal lives of the residents, which requires high-quality support, assistance and information from the local housing association.

Confirming the importance of careful planning and implementation of upgrading programmes, both Ha (2001) and Keating (2000) show similar problems and implications of housing upgrading in Korea and USA respectively. Some of Ha's findings on the impact of the housing renewal programme in low-income residential communities in Korea are that homeowners and renters have a conflict of interests and become enemies as a result of the upgrading which destroyed many poor communities in the process. On the other hand, Keating (2000) comments that in the case of US public housing redevelopment, the programs frequently and forcibly displaced poor minority people without allowing their participation in redevelopment planning, without allowing their adequate compensation, without sufficient replacement housing, and without the possibility of returning to the redeveloped area. These projects in the process have destroyed indigenous social communities as they replaced the area with much higher income households.

Although not exhaustive, these overseas experiences have shown that there are both positive and negative impacts on residents brought about by the various forms of housing upgrading. Lessons from these experiences, particularly, in the planning and implementation of housing upgrading can be applied universally.

### **Impetus for Upgrading**

The broad objective of the upgrading programmes is to transform the whole concept of public housing so that quality and distinctiveness will be added to the HDB estates. This visible difference, particularly, at the precinct level will hopefully instill a sense of pride and belonging in the residents. Goh (2001) points out that these upgrading programmes signal Singapore's desire to reposition itself as a competitive global city. He further notes that the MUP, IUP and SERS are attempts to depart from the anonymous standardization of public housing forms of the past and stylistically diversifying the public housing landscape. These physical transformations are part of a larger process of social transformation not merely in terms of housing policy, but also in terms of issues of governance, class and social mobility, community and value systems. Specifically, the impetus for upgrading is threefold.

First, the shift in emphasis from quantity to quality has resulted in a marked disparity between the older and the newer estates. As the population becomes more affluent, it is natural that demand for the latter will increase while the older estates become less popular. The efficiency of the transport infrastructure, with the completion of the North East Line, has greatly "reduced" the distances of the suburban and new estates. Migration to the newer estates and the abandonment of the old estates has obvious undesirable social and economic consequences. In order to retain the population of the older estates as well as to attract the younger generation to them, these old HDB flats will therefore need to be upgraded.

Second, as the bulk of the HDB flats are approaching 20-30 years old, physical deterioration due to normal wear and tear, and in some cases, poor workmanship, are already evident. To delay the onset of obsolescence, refurbishment is the only alternative to eventual demolition and redevelopment, as in the case of SERS. If the latter were to be implemented on a wider scale, it would be far more disruptive and would result in the wastage of national resources.

Third, the market for new flats has declined over the years. The HDB has undergone a significant restructuring in late 2003, in particular, the corporatization of their building division. The Registration of Flats system which used to have an insatiable demand and long queues is now replaced by a Build-to-Order system where potential buyers apply for a flat in a particular estate and construction of the project will only commence when there is adequate demand. This reduction in new construction meant that some of the existing resources now need to be channeled to the upgrading programmes.

### **Review of the HDB Upgrading Programmes**

The MUP is targeted at 3-room flats 18 years and older as at December 1993. Other selection criteria include a good geographical spread of precincts island-wide and the general cleanliness level of the precincts. For selected precincts, improvements are made to the flat, block and the common areas in the precinct. The flat owners can also opt for a space-adding item such as a new utility room, additional toilet, new balcony or extension to the kitchen/living room. The government subsidizes a substantial part of the total upgrading cost. Flat owners who are Singapore citizens and enjoying the MUP for the first time pay only a small fraction of the cost, ranging from about \$3,000 for the standard package for a 3-room flat to \$20,000 for the standard package plus a space-adding item. For both the standard and standard-plus packages, the residents in the precinct are polled before the project is undertaken. A minimum of 75% of the eligible households must support the programme. For the standard package the vote is based on the whole precinct, while for the standard-plus package it is based on the units within the block. The latter is necessary as the space-adding item will have to be constructed for all units in the block. Obviously, this means that those who are not in favour will still have to go along with the majority decision, regardless of the reason for objection. The HDB had amended the HDB Act and relevant legislation to ensure that in the event that there is no unanimous vote for the upgrading, the MUP can still be smoothly implemented.

As of 2002, 19 batches of MUP have been launched, comprising some 119 precincts in the older HDB estates (HDB, 2003). In terms of number of units, there are more than 120,000 units of HDB that have undergone or in the process of MUP (see Table 1). This represents nearly 14% of the existing total number of HDB flats, which reflects the impetus for the upgrading of the older HDB estates. To a large extent, the scale of MUP projects depends on the state of the economy. From the initial launch until the Asian Financial Crisis in 1997, there were some 10,000 units targeted for upgrading every year.

With the economy picking up again, the level of activity is expected to increase in the future.

**Table 1: MUP Batches by Year of Announcement**

Batch	Yr of Announcement	No. of Units
0	1990	5591
1	1992	4219
2,3	1993	10963
4,5	1994	10623
6,7	1995	10269
8,9	1996	8983
10,11,12	1997	14241
13,14	1998	6857
15	1999	3638
16,17	2000	8964
18	2001	13816
19	2002	22850
Total		121014

The success of the demonstration phase, in terms of the transformation of the estate and the realization of a premium in the resale prices of upgraded flats, has led to residents wanting their flats to be upgraded. To address the upgrading needs of precincts that do not qualify for MUP, a parallel program, the Interim Upgrading Program (IUP) has been introduced for flats between 10 and 17 years old as at December 1993. Unlike the MUP, the IUP only upgrades the block and common areas within the precinct and is financed totally by the government. The respective town council administers the implementation of the IUP and receives a grant of \$4,000 per flat for the precincts selected for upgrading. As of 2002, 8 batches of IUP covering 190 precincts are at various stages of the upgrading exercise (HDB, 2003). In terms of units, the total number so far is 156,443, which is more than that for MUP. This is to be expected as the IUP is really the government's effort in improving the living environment which does not impose a financial burden on the residents. Nevertheless, in order for an IUP to be undertaken, the residents in the precinct must still vote whether they are in favour or not. As with the MUP, a minimum of 75% of the residents must support the programme for the project to go ahead.

For SERS, selected old blocks of sold flats in sites with high redevelopment potential are identified for redevelopment into more intensive and better quality housing. New public housing flats will first be built at vacant sites in close proximity to the designated SERS sites. These replacement flats will be offered to the lessees involved. After they have moved into the replacement flats or other accommodation, the old flats will be demolished to make way for development of more new flats on the existing site. Flats earmarked for SERS will be acquired under the Land Acquisition Act. Owners are

compensated for the acquisition of their flats at the prevailing market values and given a package of re-housing benefits which gives them the option to purchase new flats at the replacement sites at subsidized prices. Eligible owners are given a further 20% discount, subject to a maximum of \$30,000. As of 2002, 50 precincts (20,204 units) have either completed the SERS or are in the process of doing so. Five more precincts have been announced.

In comparing the three upgrading programmes, the general observation is that residents would prefer SERS over MUP or IUP because it is seen as economically more beneficial to the residents. In any case, no voting is required and hence, a comparison of the popularity of the three programmes cannot be made from the polling results. On the other hand, the polling results for MUP and IUP announced so far, nearly all the precincts selected have gone ahead with the respective programme. However, a MUP precinct bucked the trend last year and did not obtain the minimum vote of 75% at the polling. The reasons given for the less than required support were that the poor economic condition had exacerbated the financial burden on the residents as well as the possible attendant problems of arising from the construction work, especially when the news of a few contractors who went into liquidation doing MUP work, which had resulted in prolonged inconvenience for the residents, was publicized.

Besides the three main upgrading programmes there are also other forms of upgrading projects carried out by the HDB. These include the Lift Upgrading Programme (where blocks of flats are installed with new lifts that stop at all floors), the Rental Flat Upgrading Project (only applicable to blocks set aside for rent by the HDB) and the Hawker Centres Upgrading Programme (where the markets and food centres serving the various HDB estates are rebuilt or upgraded). For the residential estates which are under the management of town councils, other improvement projects are also undertaken. These include the provision of children's playgrounds, landscaping, covered linkways and communal facilities for residents' use. Typically, town councils spent close to 10% of their operating expenditure on such town improvement projects (West Coast Ayer Rajah Town Council, 2003).

When all these upgrading works are viewed in total, it is not an overstatement to say that the living environment of HDB estates is constantly being improved and upgraded. It is therefore important to examine the impact of upgrading on residents in HDB flats as well as the avenues for resident participation, especially in MUP and IUP where residents do have a say, not least in their right to vote.

### **Impact of Upgrading on Residents**

The survey conducted in this study covers four precincts in Ang Mo Kio New Town, which comprises of flats built mainly in the late 70s and early 80s. The four precincts are in the same neighbourhood to control for differences in resident profile. Stratified random sampling is adopted to ensure representation. A total of 150 households were interviewed

using a structured questionnaire. Of these, 140 were complete and usable. The questionnaire has three main sections, covering the physical, economic and social aspects of the impact of upgrading. In most questions, the selected households are asked to rank their responses to the statements given.

From the physical perspective, residents are asked their preferences for the upgrading items in the MUP. The items are grouped under within the flat, within the block and within the precinct. The overwhelming preference is for items which will benefit the residents directly. For instance, the space-adding item (mean ranking of 1.4 out of 4) is preferred over changing windows (MR 2.8) for items within the flat; lift upgrading (MR 1.7 out of 5) is preferred over façade enhancement (MR 3.3) for items within the block; and, covered linkways (MR 1.7 out of 6) are preferred over barbecue pits (MR 5.4) for items within the precinct. This clear preference is, however, somewhat different from the findings from earlier studies. In Yu (1991), for example, an initial survey of residents in the demonstration phase shows no strong consensus on the improvement items. This could be attributed to the initial lack of information and uncertainty. With more than ten years of upgrading, HDB residents are now better informed and able to decide on what they want. Besides the upgrading items, residents are also asked to rank the problems attendant with upgrading works. Noise and dust (MR 1.6 out of 6) and inconvenience (MR 2.1) are clearly the most bothersome. Indeed, the problems arising from the construction are considered collectively as the second biggest concern of the residents when their precinct was selected for MUP.

The biggest concern is financial. In an earlier study done by Tay (1991) on two housing estates with regard to the upgrading programme, the findings show that residents from Ang Mo Kio and Queenstown, which is an older estate, differ significantly in their views concerning who should pay for the upgrading and their willingness to pay. The two estates exhibit different socio-economic background; there is a higher percentage of lower income households and elderly household heads in Queenstown than Ang Mo Kio. The majority of residents in Queenstown (77%) felt that the government alone should bear the cost of upgrading while 68% of the residents in Ang Mo Kio felt that it should be shared among the government, town council and residents. In other studies (for example, Lee, 1992 and Teo, 1993), different housing estates also reflect different views concerning upgrading due to different socio-economic profile. While this may still be true, in this study, financial consideration is nevertheless the main concern of the residents in their decision to have the upgrading programme. Despite the concern, nearly 62% of the residents thought that their share of the cost is fair and reasonable. As shown in Table 2, residents pay only 7% to 14% of the total cost, depending on the type of flat, for the standard package and 19% to 38% for the standard-plus package (i.e., the bulk of the cost of the space-adding item is to be borne by the owners).

In terms of the impact of upgrading on the market value of the flats, slightly less than half thought that upgrading would enhance the resale value of their flat. Of these the majority thought that the increase would be less than 5%. On the contrary, market observations show that resale prices reflect an increase of 10-20% for upgraded flats. This is probably due to the fact that any increase in value is unlikely to be uniform across all estates which



are in different locations and have different age. Furthermore, the impact of upgrading on resale prices and the volume of transactions are also likely to depend on the point in time during the entire MUP process. In terms of volume, transactions are likely to increase when upgrading is announced and when construction is completed, the latter reflecting the improved marketability of the upgraded flats. However, transaction volume is likely to drop significantly during construction.

A recent issue that has been raised in the media is that of cost and value (Leong and Woon, 2004). From the cost sharing shown in Table 2, a 3-room flat with a space adding item would cost \$58,300 while the resale value of the flat may only increase by \$18,000 (assuming a resale value of \$180,000 for a non-upgraded 3-room flat and a 10% premium for an upgraded flat). However, while it is acknowledged that the cost of upgrading far exceeds the increase in resale value, there are other reasons and impetus for the upgrading programmes beside asset enhancement, such as the social objectives.

**Table 2: Cost Sharing for MUP**

<b>Standard Package</b>	<b>3-room</b>	<b>4-room</b>	<b>5-room</b>
HDB's share	\$34,900 (93%)	\$33,600 (89%)	\$32,300 (86%)
Owner's share	\$2,700 (7%)	\$4,000 (11%)	\$6,600 (14%)
Total	\$37,600	\$37,600	\$37,600
<b>Standard-plus Package</b>			
HDB's share	\$47,300 (81%)	\$41,900 (72%)	\$36,400 (62%)
Owner's share	\$11,000 (19%)	\$16,400 (28%)	\$21,900 (38%)
Total	\$58,300	\$58,300	\$58,300

*Source: The Straits Times, 22 January 2004*

From the social perspective, four statements were given to the residents. They were asked to rank from 1 to 5, 1 being strongly agree and 5 being strongly disagree. The statements are that the MUP has helped to: enhance the living environment, encourage residents to continue living in the estate, improve the community relations among the residents, and inculcate greater civic-mindedness amongst residents. The respective mean ratings are 1.9, 2.7, 2.9 and 3.1. Clearly, the objectives of the MUP are met to a large extent in that the residents can sense the improvement in their living environment and thus persuaded to continue living in the estate. However, whether the upgrading has a positive impact on the social behaviour of residents is rather debatable. Lastly, residents were also asked their intention to move and whether the decision is impacted by the upgrading. The results indicate that slightly more than 90% do not intend to move within the next three years. Of those who are very likely or likely to move, the fact that the flat has been upgraded is not a factor in their consideration. Obviously, these findings may not apply across all estates in Singapore. For example, earlier surveys in other estates - Toa Payoh (Tan, 1996), Ang Mo Kio (Lee, 1996) and Bukit Merah (Chang, 1996) - show different results in terms of resident satisfaction of the completed MUP. While the residents of the first two precincts are generally satisfied with the upgrading, more than half of the

residents in the Bukit Merah precinct are not satisfied. This could be attributed to the poor management of resident participation during the upgrading process. It is therefore important to understand the profile of the residents in the estate and how successfully the upgrading project was implemented before analyzing the opinions of these residents.

## **Resident Participation**

Clearly, resident participation is a fundamental part of the upgrading process. The eventual success or failure of the project depends significantly on how well resident participation is managed. The concept of citizen participation is a well researched subject in sociology. It can be defined as the activities of the legal residents of an estate or neighbourhood or precinct which can be translated into a source of input into the formal decision-making structure of government agencies in the planning and implementation of programmes and policies which have an effect on the residents (Fong, 1986). Resident participation is citizen participation on a smaller scale and of a more localized nature. The objectives of citizen/resident participation briefly include information exchange, education through dissemination of information, support building through the conduct of activities, decision-making supplement through the provision of opportunities for residents to contribute and representative input from various groups of stakeholders (Glass, 1979). To achieve these objectives, four broad techniques of participation can be classified according to a typology based on the degree of structure exhibited, ranging from unstructured to structured participation and active to passive participation.

In the upgrading context, resident participation therefore refers to the activities of the residents which provide the opportunities for them to be involved in the planning and decision-making that has an effect on their living environment. The mechanisms and methods to be adopted for resident participation would need to take into account the different socio-economic profile of the residents in the estate. In both the MUP and IUP, the roles of the various stakeholders such as the HDB (landlord), town councils (manager of the common property), and grassroots organizations (representing the residents) as well as external consultants have been clearly defined. Committees comprising all stakeholders and external agencies are formed to oversee the entire upgrading programme from the initial planning right through the completion and handover. This means that the committee will decide on the design package as well as the schedule of the upgrading exercise.

Various methods can be used to ensure resident participation. These can be structured or unstructured, active or passive. Structured participation takes the form of the selection of the committee members. The committee must also seek participation of the other residents in an unstructured way. The polling exercise is in itself a form of active participation. Every household has a say in whether they want the upgrading and whether they want the space-adding item in the MUP. Occasionally, passive participation through random surveys of the residents need to be conducted to have a good feel of the ground.

In terms of resident participation in the upgrading programmes undertaken so far, it seems to have been well managed. Information is disseminated to residents through leaflets, brochures, exhibitions and newsletters. Education and explanation are given through dialogue sessions, walkabouts and visits by the politicians, block parties and other social functions. However, it needs to be emphasized that resident participation is not confined only to the initial planning of the upgrading. In fact, it becomes even more crucial as the project is rolled out as residents are inconvenienced by the construction. As the upgrading is carried out with residency, residents must be continuously kept informed of the progress of the project. Complaints and feedback must be taken seriously and closely monitored by the committee. These will have a direct impact on the success of the upgrading exercise. Complaints which are not attended to will eventually lead to dissatisfaction of the upgrading, even if the physical estate has been beautifully transformed.

## **Conclusion**

The main findings of the study on the impact of upgrading on HDB residents are now summarized. First, from the physical perspective, the problems associated with the construction works are very real and are a significant concern of the residents in their deliberation on whether to have the upgrading programme. With the construction industry continuing to contract, an increase in the number of construction firms going into liquidation will inevitably affect some of the ongoing and future MUP projects. HDB residents may be adversely influenced in their decision making when their precincts are selected for MUP. More concrete assurance needs to be given to the residents in terms of the guaranteed satisfactory completion of the project once it is started. Second, given the clarity of preference on the improvement work items, the HDB should seriously consider cutting down on some of the unnecessary works. This will also help to reduce the total cost of the upgrading programme, which is now more than three times the enhancement in the resale value of the flat. Third, the financial concern also needs to be addressed. Perhaps more information and explanation on the cost sharing should be given. This will also help to convince residents that the enhancement in value actually exceeds their share of the cost of the upgrading. Fourth, while there are sufficient avenues for resident participation and that the participation is generally well managed, more could be done to bring the residents closer, judging from the findings of the survey. The upgrading exercise is an excellent opportunity to build better community relations and to inculcate greater civic-mindedness amongst the residents, which should form part of the objectives of the upgrading programmes. And last but not least, a long term strategy for the upgrading of HDB estates needs to be carefully thought through. Besides the cost of the upgrading, which is largely borne by the government, the upgraded precincts would also cost more to manage and maintain. A sense of inequity may prevail between firstly, those who live in private estates and the HDB residents, and secondly, those whose flats have been upgraded and those whose flats are yet to be upgraded.

Clearly, these are problems which are not easily solved but hopefully, with more dialogue and information, a better longer term strategy for housing upgrading can be evolved.

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