

STRATEGIZING SLUM IMPROVEMENT IN INDIA: A METHOD TO MONITOR AND REFOCUS SLUM DEVELOPMENT PROGRAMS

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Introduction

India's 10th Five Year Plan noted that the urban slum population is growing despite sharp reductions in poverty and rising incomes. The central and several state governments recognized the need for intervention by initiating, or enlarging existing urban housing and other slum subsidy programs. With this in mind, the Government of India (GOI) has requested a loan from the World Bank to implement a more effective strategy and delivery mechanism for the financing of urban slum improvement and sanitation provision in underserved areas.

In order to support the GOI to achieve the goals delineated in 10th Five-year Development Plan concerning slum improvement and poverty alleviation in urban areas, the Bank has agreed to consider a program that will focus on (a) refining the national policy framework for the upgrading of urban slums and sanitation in underserved areas in India; (b) working with the states and various beneficiaries to establish a methodology which measures program performance of both the GOI and the states, and identifies concrete monitorable steps that can be taken to improve this performance; (c) developing appropriate monitoring mechanisms to enable the evaluation and modification or redesign of the programs which would improve the transparency, efficiency, administrative simplicity, and targeting of the assistance; and (d) developing funding schemes for slum improvement and sanitation that could provide incentives so that resources are used more effectively and the program reach expanded. In doing so, the program will: (i) contribute to poverty alleviation in the poorest urban areas in India; (ii) strengthen human capital in poor neighborhoods by increasing community participation in planning, delivery and maintenance of public works and services; (iii) improve the efficacy of the use of more than \$400 million of annual government expenditures on these programs.

This paper is the first joint GOI-World Bank attempt to examine the existing housing and sanitation programs with a view to developing a framework for evaluating them. Data was collected for four Housing Subsidy programs and two Sanitation programs from a series of conversations with government officials in concerned ministries at both the federal and the state government levels and from Government of India documents.

The structure of the paper is as follows. First, the caveats to the analysis are spelled out. The next section presents the necessary background. Then section III briefly describes the five programs evaluated. Section IV examines how each of these programs measures up against the evaluative criteria. Section V presents the conclusions while section VI outlines the way forward.

I Caveats to the Analysis

Among the existing housing programs, three federal programs and two state level programs were examined. Two of the national programs – the Valmiki Ambedkar Awaaz Yojana (VAMBAY) and the National Slum Dwellers Program (NSDP) – are run in conjunction with the states and are primarily urban programs.^[1] The third national program, the Indira Awaas Yojana, is a rural housing program. The state level programs are Karnataka's Urban Ashraya Housing Program and Kerala's Mythri Housing Scheme. Finally, a new program that the Kerala government is considering- the Bhavanashree program- is also appraised. This last program was included because its' program design addresses some of the concerns that the paper shares about existing programs. However, since this program is still in its design phase,

the analysis of this program in this paper should only be considered as an appraisal and should not be read as an evaluation.

Apart from the housing programs, a couple of slum sanitation initiatives – the Pune Sanitation Project and the national level Nirmal Bharat Abhiyan – are also examined. These sanitation programs were included because they are integral to any slum upgrading program. Furthermore, there are design elements in this program that are worthy of emulation in all slum upgrading programs.

Since this is an informal study of a few selected programs, a necessary caveat that there might be inaccuracies in the specific details of the programs also has to be added. The paper has tried to minimize these errors but a major part of it has focused on ensuring that the general characteristics of these programs are as accurate as can be. The inaccuracies that might have crept in also point to the need for better data about the urban poor in India as well as the housing subsidy programs, a case that the paper makes during the course of this paper.

II Background

GOI's policies on slums have undergone a paradigm shift in recent years. In the 1970s and early 1980s, the government emphasized the notion of 'slum free cities'. What this often meant was forced or voluntary resettlement of slums in central cities. However, over time, the weaknesses of such a program became evident. Firstly, the slum dwellers who were being resettled were fully integrated in the economies of the cities. They were economic agents adding to crucial economic output. Resettling them would have adverse economic consequences. Secondly, removing slums from central cities and transportation nodes often meant that the new settlements on the outskirts of the city were far from jobs, thus further worsening the welfare of slum dwellers. With this realization, the government started focusing on slum upgrading and slum rehabilitation programs. In the initial years of slum upgrading, the focus was on providing infrastructure to the slums through the NSDP. Now there is increased stress on provision of shelter to urban slum dwellers through VAMBAY.

India's new focus on economic liberalization and on decentralization has posed significant additional challenges to urban development in the country over the last decade. In particular, the country's thrust on decentralization under the 74th Constitutional Amendment Act has led to a new emphasis on improved urban governance and management with a view to increasing cities' efficiency and reducing urban poverty. This is a major challenge for a country with some 433 million people living on less than US\$1 a day, 36% of the total number of poor in the world. India also has some 20% of the world's out-of-school children. Out of the 290 million (28% of the population) that live in urban areas, 62 million live in slums. This represents over 21% of the urban population in India. These urban poor suffer disproportionately from adverse health impacts linked to lack of proper shelter and basic services, in particular sanitation. Conditions are particularly adverse in India's largest cities, as the top mega-cities in India (Mumbai, Delhi, Kolkata, Chennai, Bangalore, and Hyderabad) house 18% of the total slum population in the country.

This emphasis on improved urban governance takes a new dimension, as the urban sector increasingly becomes an important driver of economic growth. Urban centers contribute more than 60% of the country's Gross Domestic Product (GDP), which highlights their role in achieving national economic growth targets. In this context, urban infrastructure has a prominent role in the GOI's Tenth Five-Year Development Plan (2002-07). It aims to improve urban infrastructure as critical to growth and poverty alleviation through decentralized urban local governments with strengthened capacity to deliver services. The GOI has estimated that the country needs to reach an economic growth rate of at least 8% in order to significantly reduce the incidence of poverty. For the first time, the Ministry of Urban Development and Poverty Alleviation (MUDPA) has designed a comprehensive Urban Development Strategy focusing on fiscal, financial, and institutional changes. As a cornerstone of the urban strategy, the MUDPA has introduced the Urban Reform Incentive Fund (URIF) in 2002. Through financial incentives from this centrally funded scheme, GOI encourages systemic reforms at the State level. Simultaneously, GOI has set up the City Challenge Fund (CCF) to promote reforms in citywide governance and service delivery.

Despite this progress, the sheer volume of resources required to address the needs of the urban poor threatens the sustainability of current efforts. Unless a sustainable framework for financing urban slum improvement is implemented, successful scaling up of these initiatives would be difficult to undertake; and without successful large-scale poverty reduction in India, it would be impossible to achieve the Millennium Development Goals. This program is well suited to support the GOI in the pursuit of large-scale poverty reduction in a sustainable manner.

III Current Subsidy Programs

There is a general perception that the government should help to improve the housing conditions of the poor, but the programs actually sponsored appear poorly positioned to deliver on that result. Table 1 shows that the selected urban programs allocate approximately \$130 million of GOI assistance per year.^[2] Ideally, the Government of India would target the 40 million poor urban slum dwellers (of an estimated total slum population of 60 million) with these funds. However, even if those resources went only to the intended beneficiaries, every slum dweller would receive no more than \$3 of assistance per year.^[3] Given the unit costs of even very modest housing, this amount is obviously not enough to have a substantial effect. On the other hand, providing more assistance to a fewer beneficiaries leaves out others who are equally deserving. The relative paucity of resources allocated to housing the urban poor underlines the importance of using those resources more effectively and leveraging them better.

In this context, for example, a program that provides \$75 per year of assistance (and which could correspondingly serve less than 4 percent of poor urban slum dwellers) would have no discernible impact on the overall number of slum dwellers. For this result to occur all that would be necessary is that the slum population increases by 4 percent or more, as it often has in the past 20 years. With this increase in the number of households in need, there would be no reduction in the slum population. Although such a program helps a non-trivial number of slum-dwellers, there would be no effective difference in number of slum dwellers. Thus, given the large and growing numbers of slum dwellers, and the limited availability of public resources to assist them, designing programs that most effectively use the resources and that make them go the farthest is of particular importance.

Table 1: Selected Government of India Programs for the Urban and Rural Poor Plan allocations for 2001-02 in Rupees millions

Urban Programs Program Description	Allocations	Rural programs Program Description	Allocations
Housing and Slum Improvement Programs			
Valmiki Ambedkar Awas Yojana (VAMBAY), introduced in 2001, focuses on shelter for the urban poor, with 20 percent of total allocation for community sanitation facilities under the Nirmal Bharat Abhiyan (NBA) program	736.0	Indira Awas Yojana (IAY) , launched in 1985 as sub-scheme of JRY, was made into an independent scheme in 1996. It provides full grants to the rural poor for construction of their houses.	15270.0
National Slum Development Program (NSDP), launched in 1996, provides funds for physical and community infrastructure as well as shelter upgrading to. It uses the community structures developed first under UBSP, and later under SJSRY.	3850.0		
Water Supply and Sanitation			
Accelerated Urban Water Supply Project (AUWSP) is not strictly for the poor, but provides funding for water related infrastructure in small towns with less than 20,000 in population. GOI started this program in 1993-94.	950.0	Accelerated Rural Water Supply Program (ARWSP) provides finance for RWS schemes on a need basis. Within ARWSP, 20 percent of the funds are reserved under the Sector Reform Program (SRP) for those States that are willing to adopt key sector reforms related to cost recovery and community management.	20100.0
Urban Low Cost Sanitation (LCS) . GOI initiated this program in 1980 and it aims at liberation of scavengers through subsidies for conversions of dry latrines into low cost pour flush latrines.	398.0	Total Sanitation Campaign (TSC), introduced in 1999, restructures the previous supply-driven Community Rural sanitation program (CRSP). It puts greater emphasis on demand generation and awareness with a significant reduction in the subsidy.	1500.0
Total Urban	5934.0	Total Rural	36870.0

Sources: Annual Report MUDPA, 2001-02, Annual Plan, Planning Commission, 2001-02 and Annual Report MRD 2001-02. Adapted from World Bank Urban Strategy for India, 2002.

Table 1 shows that rural housing-related subsidy programs receive more than six times the public resources devoted to similar urban programs even though the rural poor outnumber their urban counterparts by less than three to one, 197 versus 67 million respectively. Consequently, on a per capita basis, the rural poor receive almost twice as much housing assistance as the urban poor.^[4] This difference in allocation does raise questions about how public expenditures are determined.

Table 2 lays out the essential characteristics of the five housing programs considered here. For a detailed description of each program, please refer to Appendix 1.

Table 2: Comparison of Housing and Slum Dweller Programs

Program	To State	To Beneficiaries
NSDP	<ul style="list-style-type: none"> · 70% Loan · 30% Grant <p>For special category states, the amount is given as 90% grant and 10% loan.</p>	<ul style="list-style-type: none"> · Selection and development of one slum in each city as a "model slum" in the case of Karnataka · 10% of NSDP funds can be used for housing construction and/or upgradation (the rest should be used for physical and social infrastructure). · Housing provided on loan (Rs. 50,000); amenities free of cost
VAMBAY	<ul style="list-style-type: none"> · 50% Central subsidy · 50% matching funds from State · From GOI routed through HUDCO 	<ul style="list-style-type: none"> · <i>80% of total amount received from GOI spent on housing of which:</i> · 50% given as subsidy · 50% as loan. · 20% to be invested in the provision of water supply and sanitation (toilets) within the assisted slums
IAY	<ul style="list-style-type: none"> · 80% federal grant · 20% state grant 	<ul style="list-style-type: none"> · Rs. 20000 in housing grants (Rs. 22000 in hilly and difficult areas) for housing construction. · The amount to be used for construction of sanitation facilities and 'clean' cooking facilities. · Infrastructure to be provided by the implementing agency.
Urban Ashraya	<ul style="list-style-type: none"> · GOK takes loans from HUDCO 	<ul style="list-style-type: none"> · Housing loans ranging from Rs. 25,000 to 40,000 provided per the size of city, excluding Rs. 5,000 upfront deposit · 100% loan
Mythri Program	<ul style="list-style-type: none"> · Gov. of Kerala takes loans from HUDCO 	<ul style="list-style-type: none"> · Total subsidy Rs. 28000 of which 19000 in loans at 5.5 % interest rates (HUDCO interest rates of 13.5%) and cash grant of Rs. 9000. · Beneficiary contribution of Rs. 2000
Bhavanashree Programs	<ul style="list-style-type: none"> · From various financial institutions 	<ul style="list-style-type: none"> · Loans between Rs. 30000/- to Rs. 40000/- · No subsidy in loan interest rates (between 7% to 8% interest rates).

Sources: KSCB and RGRHCL, Bangalore, March 2003 and KSHB and Kudumbashree, Trivandrum, January 2004. Ministry of Rural Development website.

IV Evaluation of Subsidy Programs

Five criteria were used in the analysis of these programs: Targeting, Efficiency, Transparency, Administrative Simplicity and Sustainability.^[5] In the absence of highly specific data, the paper undertakes a discursive analysis of the components of these programs. Rather than viewing this discursive analysis as a weakness, it is in many respects a strength. It is fully in the spirit of the way the World Bank undertakes ex-post evaluations of its projects – assigning a level of performance based as much as possible on quantitative measures.^[6] It is also consistent with the approach taken by, for instance, the European Bank for Reconstruction and Development in its evaluation of the many dimensions of reform in the former socialist economies.^[7] Moreover, this approach not only sheds light on the strengths and weaknesses of these programs, but it also requires policy-makers to consider explicitly how and why they believe a program performs against a specific standard.

Each of the programs are rated on the five criteria on a scale of 1 to 4 in increasing order of excellence. A program that rates poorly gets a score of 1 while a program that satisfies all the concerns under a specific criteria gets a score of four. While some of these programs can be vastly improved by some

small changes in the program structure, other programs need wholesale reform in the way they are designed. A detailed discussion on each of these measures is presented in Appendix 2.

Table 3 shows that the four housing programs have an average rating between poor and fair (an aggregate score of less than 10). In contrast, both the sanitation programs examined are rated higher with scores of 12.5 and 13.5. For a full analysis of each rating given, please refer to Appendix 3.

Table 3 Rating of Housing and Sanitation Programs

	Targeting *	Transparenc y	Efficienc y	Administrative Simplicity	Sustainabilit y	Total Rating
VAMBAY	1.67	2	1	1	1	6.67
NSDP	1.33	2	1	1	1	6.33
IAY	2	3	3	1	1	10
Urban Ashraya	1.5	2	2	2	1	8.5
Mythri	3	1	2	2	1	9
Bhavanashree	3.5	2	3	3	2	13.5
Pune program	3	3.5	2	3	2	13.5
NBA	3	2	2.5	2	2	11.5

*The targeting rating is the average of the ratings each program got for each of the three targeting components. See Table 2.

(Key: 4 – Excellent, 3 – Good, 2 – Fair, 1 – Poor)

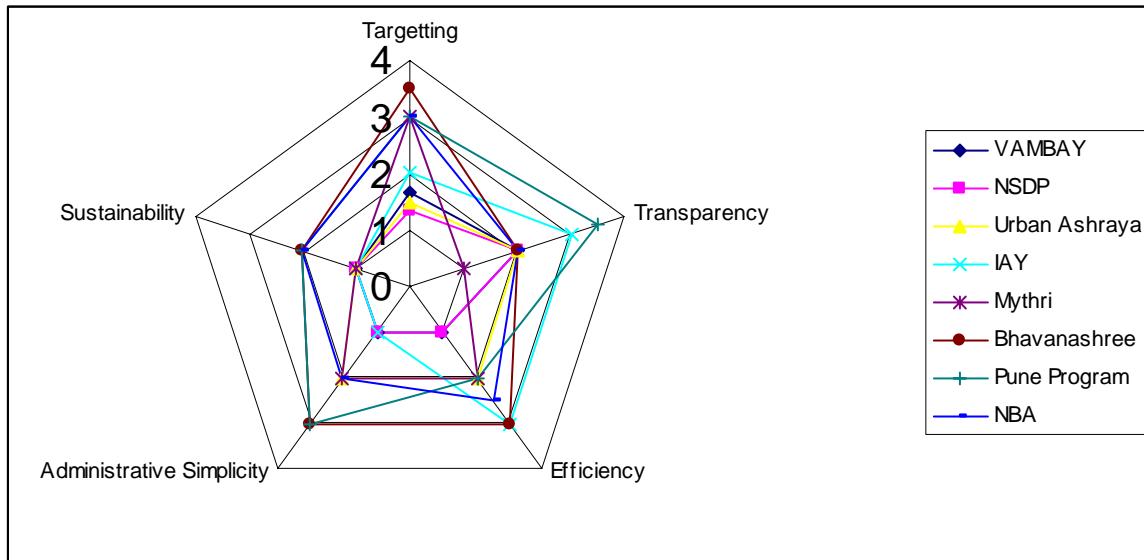
The twin sanitation programs rate better than the low-income housing programs. The most notable improvement of these sanitation programs are better targeting through greater community participation and better efficiency through the institution of user fees. However, there is much room for improvement in the sanitation programs. The capital costs in both programs are either fully or very heavily subsidized. Given the demand for sanitation facilities in India, it might be more sustainable and more efficient to include a beneficiary contribution element to the funding of capital costs. This will necessitate that the local government work with CBOs in designing and building these programs. Such collaboration will not only ensure that these programs are more sustainable but also improve consumption efficiency.

V Conclusion

On the positive side, most of the programs studied appear to favor cash grants and loans to in-kind subsidies. This is a big improvement from the days when most developing countries (and even some developed countries) had large and expensive public housing programs. Cash grants increase consumption efficiency because they are more likely than in-kind grants to be valued at the cost of the subsidy.

However, the overall picture that emerges when these programs are examined is not an optimistic one. Figure 1 provides a visual perspective on how these programs rate and how far they will have to travel if they are to become 'excellent' programs. The five housing programs that are underway have an average rating between poor and fair. Each of the five Indian housing programs that were evaluated got an aggregate score of 10 or less than 10. In contrast, both the sanitation programs examined here are rated higher with scores of 12.5 and 13.5 because they had better targeting mechanisms and greater community participation.

Figure 1: Rating of Various Subsidy Programs



(Key: 4 – Excellent, 3 – Good, 2 – Fair, 1 – Poor)

Each of the programs show room for better design and implementation in each of the criteria that is used. In order to continue developing a housing policy framework it is important that existing programs are reassessed to understand the scope for better targeting and more efficient, transparent, and “user friendly” programs that the government can then scale up. Several points have emerged for consideration and further validation:

Insufficient Resources: Current government allocations for urban slum programs cannot achieve a significant reduction in the numbers living in sub-standard housing unless further contributions from beneficiaries, local governments or the private sector can be mobilized. According to the Government of India, current programs result in less than 100,000 new units a year. Since there are approximately 12 million households dwelling in slums, this funding covers less than 1 percent of the need for better shelter. Leverage is essential if conditions in slums are to be measurably improved. Given the relatively high cost of housing even for the poor, there is ample evidence that contributions from beneficiaries can be a part of this leverage. For example, in the Sanitation Program in Pune and in the Nirmal Bharat Abhiyan, by moving the responsibility of maintenance to the beneficiaries and by levying user charges, the fiscal burden on the state is reduced drastically. In the long run, the capital costs are only a small percentage of the total cost building and maintaining better sanitation facilities. Beneficiary participation makes such programs feasible and allows increasing the coverage of the programs. Such a move will also have beneficiary effects on targeting by reducing the probability of manipulation by interested parties as well as increase efficiency by reducing the per-unit subsidies.

High per-unit subsidy rates: Subsidy rates ranging between 80 to 90 percent of total cost of housing (see Annex 4) are very high. It is very probable that the government can achieve the same housing objectives with far less direct outlay. By eliminating the unbudgeted subsidies embodied in free land and loan defaults, the scope of slum programs might be increased three to four-fold.

Increase Administrative Simplicity: Reducing the subsidy element in central schemes offers scope for administrative simplification, thus improving effective targeting to poorer states with weak capacity to make use of these programs.

Reducing reliance on supply-driven design: Such a move increases beneficiary satisfaction and increases efficiency. This means that using the kind of self-help groups used by the Kudumbashree

program in Kerala might be useful not only in furthering the shelter solutions but also in other aspects of poverty eradication.

Mobilize alternative mechanisms for beneficiary contributions: Many of the current programs try to increase beneficiary contributions by having a loan component as part of a housing subsidy program. Even when these loans are not heavily subsidized through lower than market interest rates, the very poor repayment performance functions as a hidden subsidy. This has undesirable side effects on the viability of state finances and central funding agencies. Therefore, alternatives for mobilizing beneficiary contributions are urgently needed.

Prioritised and Demand-driven Programs: In all slum related schemes, specific projects will have to be identified by municipalities in consultation with slum dwellers and given priority. This will ensure that only viable projects are taken up and that community participation is forthcoming. As argued earlier, community participation often optimizes resource use. Furthermore, it might be important to prioritize various projects on set criteria due to the constraint on resources.

Land Monitoring and Control: Very often, slums develop on public land. The governmental regulatory/enforcement mechanism that governs these lands has to be strengthened. For instance, as a policy, the concerned department (on whose land the slum has come up) should have to take stock of the land afresh and take care of rehabilitation of the slum dwellers on their own because it was the poor enforcement mechanisms of the department that resulted in the slum. This would trigger a debate on the issues such as land management, land-holdings as per requirements, inventory costs and more importantly, exploring the possibilities for allocating some land for rehabilitation of slum dwellers. Moreover, it might force the department to retrieve parts of the unused land which could then be commercially exploited to finance the slum rehabilitation programs.

The paper recommends further exploration of these issues, re-examination of state and central programs in light of these tentative findings, and consideration of alternative approaches being used in India and in other developing countries. Governments can increase the number of urban poor substantially helped by these programs at the current level of expenditure—if reforms of these programs are undertaken.

VI The Way Forward

This paper provides a basis for discussions between the World Bank and the Government of India regarding future World Bank assistance and policy work in this sector, and demonstrates the losses likely to be sustained by the sector in the absence of reforms. The Bank stands ready to support the GOI's efforts to improve the lives of the poor and proposes to immediately start the studies above in preparation of the World Bank funded Urban Upgrading and National Sanitation Program.

In particular, in order to design a more effective strategy and delivery mechanism for the financing of urban slum improvement and sanitation provision in underserved areas, the proposed steps below should be followed:

1. Undertake a series of studies and preparatory activities for slum improvement strategies. To do this, a methodology similar to the one described in this paper should be agreed upon in consultation with the MoUDPA and the state government to evaluate the various slum upgrading programs. Furthermore, concrete monitorable steps should also be agreed upon to improve the performance of these projects.
2. Develop appropriate monitoring mechanisms that allow concerned parties to evaluate, modify and/or redesign these programs to improve efficiency, transparency, targeting and administrative simplicity.
3. Develop funding schemes for slum improvement and sanitation that provide incentives to use resources more effectively as well as to expand the reach and coverage of these programs.

4. Strengthen the national resource Cell at the MoUDPA so that it can assume its role as repository of information for policy making. This cell should be supported by a research cells at the national and state levels.
5. Implement GIS based urban planning systems for slum identification and management as well as develop a database of slum dwellers, squatting areas, land policy regulating the area, and ownership status in order to prioritize projects. A mechanism for developing and updating this database will have to be worked out with state and local government bodies.
6. Explore mechanisms for involving public or private sector financial institutions to enlarge the resource base for taking up various slum development programs.

Appendix 1

The National Slum Development Program (NSDP) was launched in 1996. Annually, the program provides about Rs. 400 crores (Rs \$ 4 billion) in assistance. The objective of the program is slum upgrading through the provision of physical amenities, community infrastructure, health care and social amenities. Up to 10% of the funds can be used for housing construction/upgradation. The Planning Commission allocates funds annually, in proportion to the share of the national slum population in each State or Union Territories (UT). Then the Ministry of Finance releases the funds to the States or the UT. MOUD&PA is the Nodal Ministry responsible for monitoring and for the implementation guidelines. Neighborhood Committees and Community Development Societies should implement the NSDP at the local level.^[8] Slum Development Committees, including elected representatives from ULBs, NGOs and community-based organizations, should oversee them. The program has both loan and subsidy components. For the larger States, loans constitute 70% and subsidies 30% of total allocated funds. For the smaller States, the loan component is only 10% and the subsidy 90%. All construction is undertaken by contractors.

Valmiki Ambedkar Awas Yojana (VAMBAY), initiated in 2001, was designed to address housing deficits for the urban poor. It provides about Rs. 300 crores (Rs 3 billion) of annual assistance to designated state agencies who then determine beneficiaries and monitor the implementation. The state government must provide the beneficiaries with a title and/or land as a pre-condition for the loan or subsidy. Its goal is to achieve 'Cities without Slums' by providing or upgrading shelter for people living below the poverty line in urban slums including members of Economically Weaker Sections (EWS) who do not possess adequate shelter. The scheme also addresses the lack of rudimentary toilet facilities with a National City Sanitation Project, "Nirmal Bharat Abhiyan". GOI mandates State governments to use twenty percent of the total allocation under VAMBAY for the National Sanitation Project. The rest of the scheme funding provides matching subsidies and HUDCO loans to title holding beneficiaries to build or upgrade a house. Funds from VAMBAY can only be used in notified slums^[9]. In addition, GOI does not release the funds to the state government until they receive the States' 50% matching fund. Very often, the state government provides land on which to build the house. All construction is undertaken by contractors.

Indira Awaas Yojana (IAY) was initiated in 1986 as a part of the Rural Landless Employment Guarantee Program after which it became part of the Jawahar Rozgar Yojana in 1989. In 1996, it took effect as an independent scheme to provide grants for housing construction to rural residents who are below the poverty line. A minimum of sixty percent of funds are reserved for Scheduled Caste/Tribe (SC/ST) households. The beneficiaries are selected by the Village Panchayats based on the list of those households in the target area who are below the poverty line. Rs. 20000 is provided to selected beneficiaries to build a new home or Rs. 10000 is provided for upgrading existing houses. Selection of construction technology, design of houses, and purchase of construction material is left to the beneficiaries. The dwelling units are required to be in the name of the female member of beneficiary household. The beneficiaries are strongly encouraged to build sanitation facilities as part of the dwelling unit. Cooking facilities (chimneys) that are fuel-efficient and smoke-free are also required in the dwelling facilities. For the purpose of guidance and monitoring of construction, voluntary agencies with a good

track record are encouraged to be active in the implementation of the IAY. The Center allocates funds to the states on the basis of the proportion of rural poor in the state to the total rural poor in the country. Within the states, the same formula is used to distribute funds between districts. Eighty percent of the total funds come from the central government and twenty percent from the states.

Urban Ashraya Housing Program is part of a Government of Karnataka scheme that provides housing to those who are homeless. The scheme aims to provide 300,000 urban units and 800,000 rural units to households living below the poverty line. The state grants 15-year loans of Rs. 40,000 to beneficiaries in larger cities and Rs. 25,000 for those in smaller cities. In addition, beneficiaries must make a minimum contribution of Rs. 5,000. Since the inception of this scheme, 80,879 houses have been built in urban areas under the supervision of the Rajiv Gandhi Rural Housing Corporation Limited (RGRHCL). The program does not specify the design or construction of the house and beneficiaries are given the option of building the houses themselves. The Government of Karnataka selects beneficiaries based on a 1995 survey of "siteless/houseless persons" and "those who has their own site but were houseless" which is periodically updated by the municipality.^[10] Here again, the state government provides land on which to build the house.

Mythri Housing Scheme was the primary Government of Kerala housing scheme from 1996 to 2002. In this period, the Kerala State Housing Board implemented the scheme and financed over 270,000 homes under this scheme. Beneficiaries who qualified for the program could get Rs 9000/- in capital subsidies (cash grants) and Rs 19000/- in loans at 5.5% interest rates. The beneficiaries had to own 1.6 cents (approximately 64 square meters) and had to make a minimum contribution of Rs 2500/- to use the program. The program does not specify the design or construction of the house. The Government of Kerala selected the beneficiaries based on whether they fit four of the nine criteria that identifies Below Poverty Line households. Kudumbashree^[11], a poverty eradication program implemented by the Kerala government, undertook the targeting for this program.

Bhavanashree Housing Program, a new program that is designed to be subsidy free, comes under the highly successful Kudumbashree program undertaken by the Kerala state government. Under this program, ten to fifteen years loans ranging between Rs 30000/- and Rs 40000/- are allocated to needy households. For this purpose, the Community Development Societies have negotiated bulk loans from financial institutions. The program gives the beneficiaries a choice in the duration and the amount of the loan. The interest rates range between 7% and 7.5%. The Kerala Government calls the program a subsidy free program because of the absence of explicit subsidies and subsidy-free interest rates (the negotiated interest rates with Housing Financial Institutions are 7% or less). The beneficiaries are those identified to be below the poverty line and who are members of the CDS. Like the Mythri program, the beneficiaries have to own 1.6 cents (approximately 64 square meters) of land to qualify for the program.

Pune Municipality Sanitation Project: Over the last fifty years, the Government of India has funded various sanitation initiatives around the country. Most of these were haphazard efforts at constructing public use toilets that over time became dysfunctional due to poor mechanisms that oversaw maintenance and design. Nevertheless, more recently, there have been some signs of success. In Pune, a major sanitation initiative resulted in the construction of 475 sanitation units, with each unit ranging between 10 to 60 seats. In total 10,000 toilet seats were provided. For a city with a slum population of 600,000, this is a major initiative. What makes this initiative worth closer study is the fact that while the capital costs of Rs 40 crores (Rs 400 million) were covered by the Pune Municipal Corporation, community based organizations (CBOs) have agreed to be responsible for the maintenance. This addresses one of the main causes of the failures of earlier programs. Furthermore, under this program, a slum family is required to contribute a nominal monthly amount for the use of the facilities. This contributes to making this program more efficient and sustainable.

Nirmal Bharat Abhiyan: A new National City Sanitation Project under the title of "Nirmal Bharat Abhiyan" is an integral sub component of VAMBAY. Twenty percent of the total allocation under VAMBAY is

dedicated to the construction of community sanitation facilities. Of this 20%, fifty percent will be in the form of a subsidy and fifty percent as an HUDCO loan. The State Governments/Local Bodies will be free to supplement this amount with their own grant or subsidy as the case may be.^[12] Each toilet block will be maintained by a group from among the slum dwellers who will make a monthly contribution of about Rs.20 or so per family and obtain a monthly pass or family card.^[13]

Appendix 2: Criteria for Evaluating Subsidy Programs

Targeting: Targeting is traditionally measured in three ways:

- (1) how much of a transfer actually goes to beneficiaries, in this case poor urban slum dwellers, as opposed to those for whom the subsidies were not intended? In other words, how much of the expenditure can be viewed as “leakage” from its intended target. The higher the leakage of resources to, for instance, higher income families, the lower is the effectiveness of targeting on this scale;
- (2) how much of the intended audience, in this case all poor urban slum dwellers, receives a transfer? That is, how much “coverage” of the intended audience is allowable with the resources available; and
- (3) how much of the resources given to the intended beneficiaries actually goes to housing improvements? When a subsidy is for a specific and expensive good, such as housing, the subsidy per beneficiary must be sufficient to achieve a reasonable improvement in their housing conditions or at least enough to leverage other resources, which together bring about a significant change in housing consumption.

Moreover, there are many levels at which targeting can be examined. At the national level, how are the funds disbursed to the various states? At the state level, what criteria are used for disbursing funds to the local governments? And finally, at the local government level, how are the beneficiaries identified and how much of their needs are addressed by the programs? Hence, the paper measures how each program fares on the three levels: national, state and local. Then it gets an average score for targeting based on the scores for each level of targeting. Though there is a degree of subjectivity in the scores given to the programs, the paper argues that such an ordinal rating of programs is possible based on program design and implementation and that such a rating sheds light on program strengths and deficiencies.

Efficiency: All subsidy programs should be evaluated on how well they improve the welfare of the beneficiaries. For instance, there are four possible outcomes from a housing subsidy program: they could increase or decrease the quantity of housing consumed by the beneficiary; and they could increase or decrease the cost of housing services as experienced by the beneficiary.^[14]

When economists talk about efficiency of subsidies, they have in mind two kinds of efficiencies. Consumption efficiency measures whether the valuation the beneficiary places on the subsidy is equal to the cost of providing the subsidy. Production efficiency measures how the market value of the subsidy compares to the cost of providing the efficiency. Taking both these efficiencies in aggregate gives us the program efficiency. Needless to say, to even get a summary measure of these inefficiencies one needs data on the real cost of the subsidy as well as the market price of the subsidy and the valuation that the beneficiary places on the subsidy. It is therefore, very hard to pin down the program efficiency in developing country subsidy programs. However, it is relatively straightforward to make some preliminary judgments about the efficiency of these programs.

The paper does this by looking at the per unit subsidy: the percentage of the total cost of housing that is provided by the subsidy. This approach is a useful first approximation because what is known as the deadweight loss of a subsidy is directly linked to the size of the per unit subsidy. The deadweight loss represents the loss in resources involved with the distribution of a subsidy or imposition of a tax. In

general, it is equal to half the subsidy rate times the responsiveness of the market participants. The paper assumes that the price elasticity of demand for housing services is equal to one, as found in the literature. Furthermore, it can be assumed that the greater the participation of the beneficiaries in the design and the implementation of the subsidy program, the higher the probability that the beneficiary values the subsidy closer to its real cost and lower the efficiency loss. Hence, for this measure the paper has an imperfect but directly quantifiable measure by which these programs can be compared.

Transparency: Transparency in this case refers to the visibility of all costs of the subsidy in the budget. Transparency is only possible if the actual costs of subsidies are known. Therefore, in order to measure transparency, the real cost of a subsidy must be first determined and how these costs are listed in the government's budget must be examined. The higher the share of the subsidy budgeted, the more transparent it is. Improving the transparency of these programs would have significant benefits, among them better understanding of the *full economic cost* of providing housing assistance, better targeting in practice and eventually less corruption. Again, there is a direct quantitative measure of this standard: when all subsidy costs are on public budgets, transparency equals 100 percent and when none are, it equals zero. Of course, the paper often has to estimate how large the unbudgeted costs are so that the measure remains imperfect. Nevertheless, the use of such a measure allows us to ordinaly rate programs and allows for the possibility of discussing the precise sources of these measures.

Administrative Simplicity: All other things being equal, subsidy design should minimize the government's administrative cost. For instance, targeting subsidies carefully can reduce the need for a complicated administrative rationing system. Similarly, incentives that align participants' and private sector partners' behavior with policy objectives can reduce the need for monitoring and enforcement costs. For instance, when subsidies are not as deep, there are fewer payoffs for those wishing to make improper use of the program. When programs reach a larger share of the intended beneficiaries, there is less competition for the subsidies; and since competition often excludes those most in need, this would be a positive outcome. When beneficiaries are involved in the project design and execution, they can often take a role in supervision and management of resources, as well as proper maintenance once the project is completed. Here this measure is based on project design. If the programs minimizes the opportunity for interpretation and hence, manipulation by various interested parties then it gets a lower rating than if it is clear and succinct and provides little incentive for manipulation and encourages beneficiary participation. Once again, the programs are scored based on an interpretation of the strengths and weaknesses of the program but when exact measures are impossible, such ordinal ratings are a good starting point in program comparison and evaluation.

Sustainability: Any definition of sustainability runs the risk of being taking out of context. Thus in defining sustainability, it must be clear what the objective of the definition is, and conclude what it means in a particular context. In this particular context, sustainability refers to whether the government can scale up the housing subsidy program (and continued) to effectively address all the intended beneficiaries. In addition, more often than not, sustainability will mean financial sustainability. There might be programs that make a real difference in the housing consumption patterns of the beneficiaries. However, if these programs provide per unit subsidies far in excess of the financial wherewithal of the state, then such programs would rank low on this sustainability index.

Appendix 3: Rating of Housing and Sanitation Programs

Targeting

Targeting refers to the extent to which the programs reach the intended beneficiary as well as to scope and scale of such benefits. Here the paper examines the success of each program at three levels: national, state and local targeting.

National Targeting: For *national targeting*, the paper rated national programs (VAMBAY, NSDP and IAY) on their ability to target the right state according to need. GOI program funding is based on a perceived

measure of need in each state. For both the urban programs, GOI allocated funds based on the number of slum dwellers in a particular state. The IAY allocates funds based on the proportion of the rural poor in each state. The design of the programs, therefore, appears to be well targeted in terms of avoiding leakage of benefits. However, until the latest census, the measurement of the number of slum dwellers was often left to the state governments who therefore had an incentive to manipulate their numbers. Moreover, given the total number of slum dwellers/rural poor relative to the level of resources, this targeting spreads funds very thinly, and only a relatively small portion of those in need can be served effectively. In effect, the targeting goal of maximum coverage conflicts with the targeting goal of meaningful assistance to beneficiaries.

Perhaps the best illustration of this conflict is a comparison between the use of VAMBAY resources by Kerala, with 45,000 urban slum dwellers, and Bihar, with more than 500,000 urban slum dwellers. In 2002, Bihar received no assistance under this program whereas Kerala gets \$113 (Rs. 5,672) per slum dweller—the highest transfer per capita in the country. If the State, ULBs or slum dwellers in Kerala were required to contribute to demonstrate their commitment and to leverage GOI resources, this distribution might be appropriate. That, however, is not the case. What has occurred is that the administration in Bihar is so weak or uninterested that it does not take advantage of available assistance.

A straightforward means of addressing this conflict is to take into account the willingness of the state and local governments as well as beneficiaries to contribute by channeling resources to those who are prepared to shoulder a larger share of the costs. VAMBAY does this to an extent by only disbursing funds after GOI receives the states' 50% matching funds and this is why the paper rates VAMBAY higher than NSDP in national targeting. Such an approach allows the targeting system to discriminate more effectively between those who place a high value on assistance and those who do not. It would allow the subsidies to leverage the resources of those who want to address their housing concerns and were willing to share the costs. It would also help counter the pressures to target assistance to "vote banks" rather than to those who are most willing to sacrifice in order to receive assistance, see the Ramanathan Foundation Report (2002). In short, both programs could benefit from involving a wider range of contributors from the beginning.

Realistically speaking, public resources by themselves, and particularly at the national level, cannot hope to address the problem directly. Consequently, their best use is as leverage for other resources. Thus, while GOI targets both national programs in such a way that leakage to the non-poor is minimized, the small amounts of resources involved and the lack of incentives given to other contributors, their score on scale and coverage is relatively weak. The VAMBAY program and the IAY rates marginally better than the NSDP program because of the aforementioned 'matching funds' requirement. (See Table 2 for the rating of the programs.)

State Targeting: For state targeting, the paper rates all the programs on their ability to target the most needy local bodies. It needs to be mentioned here that the authors would need more specific case studies on how exactly fund-disbursements work in practice before a more accurate assessment can be made. However, based on the program design some tentative conclusions can be made. The five housing programs each have different criteria for allocating funds at the State level. The Urban Ashraya program attempts to target the most needy households by using a fixed poverty line from a 1995 survey, while VAMBAY targets only "notified slums" in Class I cities. While both approaches again score well in attempting to avoid leakage, they do not appear to be specific enough to allocate funds in an effective manner. The NSDP appears to have a more targeted method. It selects only one slum from each city as a "model slum." The slum is selected because it has the highest proportion of homeless residents. This approach may ignore a majority of slum dwellers, but it provides sufficient resources for those in the selected area. IAY disburses funds to the districts based on the proportion of the rural poor in the district to the rural poor in the state. The various Kerala programs also disburse funds to the districts based on the number of urban poor in each of the districts.

The Kerala programs rate well on this criterion because the implementing agency allocates funds to households assessed as being below the poverty line. Since the assessment takes place through the

aforementioned Kudumbashree program, there is little opportunity for political interference. However, the Kudumbashree does not cover all needy households in urban areas. There are unofficial slums in some urban areas that have no organized self-help groups or community development societies. Therefore, these programs might ignore a certain section of intended beneficiaries.

Based on the above discussion, the paper ranks the programs on the ordinal scale described earlier. The twin Kerala programs are designed better than the other programs because it takes advantage of local self-help groups in identifying needing neighborhoods and local government agencies. These self-help groups have a proven record on targeting the most needy in other poverty eradication programs of the Kerala government.

Local Targeting: For local targeting, the paper examined the mechanism by which the beneficiaries are selected (is it free from political interference), the scope of the program (what percentage of the needy are covered), and the scale (what percentage of the housing needs are accounted for by the program). In terms of implementation, it appears that NSDP, VAMBAY and Urban Ashraya programs are rife with political interference, which results in programs that neither reach the most needy residents nor provide what beneficiaries want most. In guidelines for both NSDP and VAMBAY, there are specific procedures for targeting the most needy, but in practice, they do not achieve the desired targeting. For instance, the NSDP's official criterion for 'a model slum' in a Class-I city is the proportion of households without a home, yet in practice the terms are inadequate to clearly determine the beneficiaries. When the Karnataka Slum Clearance Board (KSCB) divisional offices attempt to select 'a model slum', they must use other criteria because 100 percent of the residents have no home in several slums. Thus, in the end, guidelines based on need alone are inadequate to the task of allocating such scarce resources, and ultimately the pressure to revert to political allocation criteria is great.

Similarly, under VAMBAY, notified slums are selected based on a survey conducted by the Assistant Executive Engineer in each of the KSCB divisions within the cities. The objective of the survey is to assess the willingness of a beneficiary to agree to (1) construct the house if selected, and (2) repay the loan. Although, the government of Karnataka conducts a survey, its credibility is problematic because there appears to be political pressure in the selection of beneficiaries.^[15]

The selection of beneficiaries for the IAY is undertaken by the village panchayat based on the list of households below the poverty line. Given that the number of households below the poverty line exceeds the number of households which can benefit from the program, a clear criterion for selection of households has been laid out.^[16] As is clear from the criteria listed, there is still room for political influence and corruption in the selection of particular beneficiaries. However, to some extent this influence is minimized by the stringent transparency requirements of the IAY. At the village level, information including the list of households below the poverty line, the list of beneficiaries for the current and past year, allocations made to the village under IAY, the guidelines for selection are made public. Similar transparency requirements are made at the block and the district level, thus minimizing the scope for corruption.

The state-level Urban Ashraya scheme also appears to have a coherent procedure for targeting, but not a great deal of follow-through in practice. There are, for instance, Urban Shelter Committees for all cities/towns in Karnataka headed by the locally elected Member of (the State-level) Legislative Assembly (MLA). In addition, the ULBs prepared lists of eligible households (i.e. those living below the poverty line), which they then update from time to time. In principle, these Committees select beneficiaries from the ULB's lists. However, the membership of elected representatives on these Committees leaves considerable scope for political considerations in the selection process.

The two programs in Kerala appear much more successful at the local level because they take advantage of an existing and well-established woman-run micro-enterprise/thrift network to target individual households. This mechanism effectively rules out political interference from this important level of targeting. The Bhavanashree program is rated higher because (potentially, since this program is just in project design phase) it allows the beneficiary to borrow an amount between Rs 30000/- and Rs 40000/-

according the needs of the household. This provides a degree of flexibility and a potentially greater scale in covering the housing expenditures. However, the land requirement for qualifying for both the Kerala programs also effectively make these programs discriminate against the landless poor. However, though the Kerala Government does not tie these programs explicitly to land grants, there are other Kerala government programs do grant land to NGOs, which then distribute them to the poor. Furthermore, there are also cooperative banks that help the poor save specifically for acquiring land. As shown in Table 2, the paper ranks the Bhavanashree program very highly due to its flexibility and its ability to leverage beneficiary participation (through the land requirement). The Mythri program is not far behind because it used the same targeting mechanism that the Bhavanashree program intends to use.

Among the sanitation programs, the Pune Sanitation program got three out of a maximum 4 in the targeting criteria. Unlike the housing programs, this was primarily a local initiative. In many senses, the nature of the sanitation program ensures that targeting is done accurately. Unlike a housing subsidy program wherein there are incentives for manipulation to take advantage of cash grants, a community toilet is hardly an attractive good for the urban non-poor. Furthermore, the closer the local government works with CBOs the better the targeting is going to be. The Pune municipality, in working with the CBOs and NGOs ensured that the spatial distribution of the community toilets was done equitably. Dense urban slums tended to have larger units with higher seat capacities. However, 10,000 toilets for five hundred thousand slum dwellers meant that on average 60 slum dwellers had to share a single toilet seat. This is still a high average and there is room for further improvement in sanitation facilities for Pune's urban poor.

The Nirmal Bharat Abhiyan borrows its design from the Pune program and it is also implemented at the local level though funds are disbursed from the center at the national level through the VAMBAY program. States that take advantage of the federal funds for the sanitation project may work with NGOs and CBOs in the construction and design phase. This means that from the perspective of targeting, it is likely that the most in need will benefit from such programs. It is however not clear what the scale of these programs are and what part of the target population will be served by the program. This might, in fact, vary from state to state. However, tentatively, the paper gives the national program the same rating as the Pune program.

Table 4 provides the ratings for the different programs under the different levels of targeting. The last column provides the average targeting rating.

Table 4: Targeting Ratings for Housing Subsidy Programs

	National Targeting	State Targeting	Local Targeting	Average Targeting
VAMBAY	2	2	1	1.67
NSDP	1	2	1	1.33
IAY	2	2	2	2
Urban Ashraya		2	1	1.5
Mythri		3	3	3
Bhavanashree		3	4	3.5
Pune Sanitation Project			3	3
Nirmal Bharat Abhiyan			3	3

Transparency

For rating the transparency of the programs the paper looked at how much of the costs of the program the Government accounts for in the budget. If most of the subsidies are implicit and absent in the budgeting then the program gets a poor rating. If however, most of the subsidies are explicit, then the program is rated higher on this ordinal rating system. For example, if the government provides land for a low-cost housing development, as it does in three of the programs in Karnataka (VAMBAY, NSDP, Urban Ashraya), the cost of the subsidy should include the current market value of the land. In fact, this is not the case. (Annex 5 for the results of a partial survey in Karnataka that the Bank undertook to get a sense of these unaccounted for cost components.) In the Kerala programs, the beneficiary had to provide proof that they owned at least 1.6 cents (approximately 64 square meters) of land to qualify for the loans, thus ensuring that the land component was not a subsidy.

The IAY program was relatively more transparent than the others because of the aforementioned transparency requirements at the village, the block and the district level. The mandatory publication of fund allocation information ensures appropriate usage of funds while improving targeting. Secondly, since IAY is completely grant oriented, the direct expenses are budgeted for clearly.

Similarly, all these programs have implicit guarantees for HUDCO loans, the opportunity costs and risks of the subsidy should be made explicit e.g., cost of non-payment of government loans and the impact this has on state government finances in both the short and the long term. Furthermore, in the case of the Mythri program, the loans were heavily subsidized. HUDCO had lent the money to the State government at interest rates of 13.5 percent while the State lent it to the beneficiaries at interest rates of 5.5 percent.

Finally, the administrative costs of the programs are rarely budgeted for. Even though, the Bhavanashree program is a program that is designed to be 'subsidy' free, to the extent that there are unaccounted-for administrative costs for the program, it can never really be subsidy free. The rating of the housing programs reflects the paper's valuation that all the programs fare poorly on these criteria. (See Table 3).

The Pune program is relatively transparent because the costs are budgeted for by the municipality. The capital cost of the community toilets in Pune was Rs 40 crores (Rs 400 million) and this was fully accounted for. The maintenance costs are the responsibility of the CBOs and slum communities. The Pune program gets a high score of 3.5. However, in the case of the Nirmal Bharat Abhiyan, transparency is reduced by the fact that 50% of the funding comes via subsidized loans. Furthermore, the funds are disbursed by the central government to the state governments that then disburse it to local governments and CBOs. In each of these transfers, unless stringent accounting standards are kept, the flow of funds can be opaque. Without a specific case study, it is therefore hard to rate the Nirmal Bharat Abhiyan on this criterion. The paper gives this program a score of 2.

Efficiency

Efficiency is a measure of net benefits relative to effective costs. The closer costs are to benefits, the more efficient a program is. There are several steps to analyzing efficiency.

- First, the real cost of the subsidy must be determined by including the stated cost, any indirect costs, and the administrative costs of implementing and monitoring the intervention. The indirect costs can be very substantial, including losses on any loans insured by the State and losses due to distortions introduced in the housing or land markets.
- Second, beneficiary valuation of benefits achieved need to be assessed in relation to the determined real cost. For example, publicly provided housing often results in providing more housing than the beneficiary wants to consume. In these cases, the state could have met their housing needs with fewer resources.
- Third, the programs should be assessed to determine the extent to which they subsidize investments or expenditures the recipient would have made without assistance.

At this point, the paper cannot provide a conclusive analysis of program efficiency. However, none of the housing programs is purely in-kind transfers. Most of them are made up of cash grants and loans. To this extent, these programs, at least in design, are more efficient than public housing programs that were the primary means of providing low-income housing in many developing countries in previous decades. Nevertheless, this preliminary analysis indicates that all programs are highly inefficient. They confer subsidies far in excess of intended benefits for a number of reasons. These mismatch may be, in turn, a cause of the low rate of loan repayment.^[17] It is also possible to calculate the dead weight loss from the programs based on the per unit subsidy rate. Furthermore, the extent of beneficiary involvement is a good measure of how much the beneficiary might value the subsidy. The greater the beneficiary involvement, the closer the beneficiary valuation is to the subsidy.

Subsidy Rates: In Karnataka, for instance, the large overall per unit subsidy rate of the IAY (100%) NSDP (90%) and VAMBAY (80%) – see Annex 4 for calculations - is roughly three times the subsidy rate used in market economies.^[18] For developing countries, Mayo and Gross show the housing subsidy rates in seven countries averaged about 50 percent, considerably below the rates in both NSDP and VAMBAY.^[19] These rates are clearly excessive given the scarcity of GOI resources for these programs and the lack of attention given to leveraging beneficiary resources. As a result, the “deadweight losses” are multiplicatively higher for these programs than for housing subsidy programs in market economies where subsidy rates are 25 to 35 percent.

For example, when the subsidy rate increases from 25 percent of the cost of a good to the 80 percent or more that characterizes the Government of India programs, the loss in resources due to the size of the subsidy – that is, the complete wastage of resources per rupee of transfer -- increases from about 12 paisa per rupee of transfer to about 40 paisa per rupee.^[20] Therefore, instead of wasting about one-eighth of the transfer on the incentives created by the transfer, the loss increases to almost half of the amount of the transfer. Consequently, in India, even if program implementation were completely effective, the transfers provided would be considerably less effective than the smaller subsidy rate either in market economies or in developing economies. These very high subsidy rates create little accountability for the program beneficiaries and reduce the number the program assists. Certainly, investment in housing by the community is minimal so that very few sustainable changes are implemented.

To the extent that Urban Ashraya and the Mythri Programs have significant loan components to their subsidies, they are potentially more efficient. These two programs, at least at first sight, appear to have lower per unit subsidies than the national programs. However, the loan guarantees to HUDCO and low repayment rates increase the per-unit subsidy for the Urban Ashraya and the Mythri Programs. The land grant element of the Urban Ashraya programs makes the per-unit subsidy rates even higher. The Mythri Program has a 70% loan component but these loans are highly subsidized. This also increases the per unit subsidy. Therefore, the paper rates both these programs poorly, though they appear marginally better than the nationally run programs.

The Bhavanashree program is 100% loan at unsubsidized rates. Therefore, this program is most efficient from this perspective. This programs also has a built in beneficiary contribution in the form of the land pre-requisite that makes the per unit subsidy lower than the other programs. Finally, administrative costs of this program are lower than other programs because the Government of Kerala implements this program through the existing network of Kudumbashree self-help groups. This program therefore appears the most efficient of the five programs.

Both the sanitation programs rate poorly under the efficiency scale. The capital costs of the Pune program are completely subsidized by the Pune Municipality and to this extent, the program is inefficient. However, by putting the responsibility of maintenance on CBOs and by levying a monthly fee, the project builds an ownership stake in the community toilets. This design element ensures some degree of consumption efficiency.

The Nirmal Bharat Abhiyan program, on the other hand, proposes to fund only 50% of the capital costs as subsidy. The rest of the funding comes from HUDCO loans. But very often, these HUDCO loans are heavily subsidized by the central government. Furthermore, though the states borrow from HUDCO on subsidized interest rates, very often the funds are provided to beneficiaries as 100% subsidy with no expectation of repayment. This program, therefore, performs only marginally better than the Pune program.

Beneficiary Involvement: The lack of beneficiary involvement is a significant source of inefficiency in most of these programs. For instance, although the NSDP guidelines say that Community-based organizations, NGOs and other civil society organizations should be involved in implementation, there is no evidence of their involvement. In fact, only the Urban Ashraya Program appears to involve the beneficiaries in any way, because it provides an option for beneficiaries to construct the house themselves. This option increases the probable welfare gains because the beneficiaries themselves are more interested in getting the most for their resources.

Under the two national programs, since contractors do all construction under the management of the government-implementing agency, there is little scope for beneficiaries to be involved in design and supervision of works. Although the VAMBAY Program guidelines say that there is no predetermined design, in reality the houses are constructed not to the preferences and needs of individual beneficiaries but are standardized by contracted construction companies. This supply-oriented approach tends to result in houses that are more costly than need be, and the quality of work, often poorly supervised, is low. This adds up to poor value for money when money is very scarce. The IAY on the other hand explicitly rejects the option of contractors. The construction is undertaken by the beneficiaries themselves who are encouraged to choose the production technology, purchase the materials for construction and design the house. This intensive beneficiary participation does ensure that the house constructed is close to meeting the needs of the beneficiary. Hence, the IAY gets a rating of 3.

The programs in Kerala do involve considerable beneficiary involvement since the targeting and the government disbursal of funds take place through the Kudumbashree program. The beneficiary undertakes the construction according to his or her needs. As a result, the Bhavanashree program gets a rating of 3. The 2 state level programs get scores of 2 and the two national programs get scores of 1.

The Pune sanitation program also involves considerable beneficiary participation. Furthermore, by requiring community maintenance, it increases the probability of sustainability. The paper rates the Pune program 2 on a scale of 4. The Nirmal Bharat Abhiyan shares many of these characteristics with the Pune program. However, because it has a loan element in its capital costs, it scores marginally higher.

In sum, when subsidy rates are so high and beneficiary inputs so low, it is very difficult for a program to be efficient. Despite recent improvements, the efficiency of the national level slum programs appears to be less considerably lower than that of housing subsidy programs in many other countries. The state level programs appear more efficient. In addition, the design of Bhavanashree appears to make it the best among all the three programs.

Administrative Simplicity

The programs reviewed here are not administratively simple. This is underlined by the fact that in recent years both the NSDP and VAMBAY programs are only able to disburse about 70 percent of their allocated funds.^[21] Each year the funds budgeted for the programs are not fully drawn down. Although comparable figures for the IAY were not available, it is not clear that this program is simpler in implementation than the other national programs. In addition, there are significant delays in the release of funds to implementing authorities. The state level programs of Urban Ashraya and Mythri appear marginally simpler, if only because they are at the state level. The Bhavanashree program appears administratively the least complex in comparison because it takes advantage of the existing network of self-help groups to target and select beneficiaries. The success of the Kudumbashree program in other

areas like thrift and micro enterprise programs allow potential beneficiaries to use existing channels of information distribution to take advantage of these programs.

The Nirmal Bharat Abhiyan rates poorly on administrative simplicity. As its parent program, VAMBAY, some states often do not take advantage of central government funds available for housing construction or sanitation projects. This under usage of funds earmarked for a crucial developmental objective is a symptom of administrative complexity. The paper gives this program a score of 2.

The Pune Sanitation Project was, in comparison, simpler from an administrative perspective. Since it was a local initiative, it was easier to disperse program information and to invite interested community organizations to take advantage of the program. Furthermore, by decentralizing maintenance responsibility of individual toilet units, the municipality saves on the complex maintenance costs that have condemned similar projects in the past. This program gets a score of 3 under administrative simplicity.

Sustainability

All the six housing programs rate very poorly on this front. For the national level programs, the fact that these programs have very high per unit subsidies (through both cash grants and subsidized loans) make them unsustainable if they are to be scaled up to meet the enormous problem of housing all the urban poor. The 'free' land grant elements to the national programs as well as to the Urban Ashraya program make them more unsustainable. The fact that the Kerala programs had a land pre-requisite made them slightly better designed from this perspective. However, the Mythri program had large loan subsidies as part of the program. By effectively subsidizing the loan component and by further having Rs 9000 cash subsidy, the program most dramatically proved itself unsustainable. The Kerala Government suspended the program in 2002 in the face of serious fiscal troubles for the State budget.

The Bhavanashree program created in response to the failure of the Mythri program, at first examination, looks the most sustainable among the five programs. The Government of Kerala designed it as a 'subsidy free' program. However, the government makes an implicit loan guarantee to the participating financial institutions. However, to the extent that these loans are disbursed through self-help groups, the repayment rates are expected to be higher. Nevertheless, there is a more subtle danger to these programs. Current economic conditions in India allow the government to borrow at 7% interest rates from financial institutions. However, there is no guarantee that such rates will last. If the rates go higher, the Bhavanashree program will have to either suspend the program or have to effectively subsidize the loans.

Both the sanitation programs also rate poorly on sustainability. The Pune project subsidized 100% of the capital costs of the community sanitation units. Most cities will not be able to afford such a large outlay of funds. Therefore, from the perspective of scaling up, the financing of the capital costs in the Pune project is a poor model to emulate. The National program, similarly, has high unit subsidy costs. Such large-scale subsidies might be untenable to provide for India's large slum population especially when there are equally compelling development needs across the country. Both programs get a score of 2, which might have been lower but for the user-fee instituted under both the programs. This user fee is a welcome change from previous programs. This means that once the capital costs are accounted for, these units have a better probability of sustenance due to community participation in maintenance. By building an ownership stake in the unit through the user-fee, the projects ensure that the users will contribute to upkeep and maintenance. The problem of the commons can be, thus, minimized.

Appendix 4: Illustration of the Impact of Loan Repayment Performance on the Effective Subsidy Element^[22] in Slum Programs: A Comparison of the NSDP and VAMBAY Programs in Karnataka

The following calculation illustrates some important points:

(1) Given the high rate of default on the loan component of these programs, the loan element may mask a substantial additional subsidy, and even distort the comparison of two different programs. In the case of the NSDP program, the “default” subsidy is about double the grant component of the program, thus making it more heavily subsidized than the nominally less concessional NSDP program. A program that is 100 percent loan, but with only an 80% default rate appears to have no direct subsidy, but the actual subsidy is higher than the nominal subsidy rate of both of these programs;

(2) Improving repayment rates frees up considerable additional resources;

(3) Both programs are very deeply subsidized, once the effect of loan defaults are taken into account.

% of Total Project Cost	Loan Element (A)	Loan Default Rate (B)	Effective Grant Due to Default (C)=(A) X (B)	Total Effective Grant 1-(A) +(C)
VAMBAY	50%	60%	30%	80%
NSDP	70%	80-86%	60%	90%

Appendix 5: Partial Survey of Implicit Subsidies through Land Grants in Karnataka

To understand the likely significance of this phenomenon, the paper sought to examine the value of land provided in relation to the housing units constructed. There is little data, throughout India, on the cost of land, the extent of vacant lands or the amount of land occupied by slum-dwellers. In Karnataka, a partial survey was undertaken to get a sense of these unaccounted-for cost components. Computations of the real value of the subsidies, based on the results of the survey, are presented in Table 5. They show that, in relation to housing costs, the value of land accounts for a very high proportion of the subsidy, often around 75 percent of total costs. In well-functioning markets land costs rarely exceed 35 percent of the property value.

While this initial survey does not provide conclusive evidence, it nonetheless suggests first, that implicit land subsidies may be worth multiples of the budgeted housing subsidy (in these cases the average is over three and one half times). Thus, if Table 5 were representative of all programs, and, if even only half of the land provided as an unbudgeted subsidy could instead be converted into cash, the current direct subsidy program could be increased to more than two and one half times its current size.

Table 5: Hidden Subsidy on Land in Bangalore Slum Assisted by VAMBAY, NSDP and Urban Shelter Programs

Name of Slum	Total Popn.*	Total No. of HHs*	No. of houses (being) built*	Total Cost of House (Rs.)	Upfront Beneficiary Contribution (Rs.)	Subsidy in Construction (Rs.)	Subsidy as Amenities (Rs.)	Subsidy as Low Interest on Loan (Rs.)	Total Subsidy Except Land (Rs.)	Area of the Site (sq. ft.)	Land Costs (Rs. per sq.ft.)	Hidden Subsidy as Land (Rs.)	Total Subsidy (Rs.)
VAMBAY													
Bharat Mata Slum	1,075	180	171	10,260,000	855,000	5,130,000	0	2,372,625	7,502,625	21,780	500	10,890,000	18,392,625
A.D. Hally Slum	2,470	387	190	11,400,000	950,000	5,700,000	0	2,636,250	8,336,250	108,900	450	49,005,000	57,341,250
Tank Mohalla	2,500	500	458	27,480,000	2,290,000	13,740,000	0	6,354,750	20,094,750	114,345	500	57,172,500	77,267,250
Laxmanrao Nagar	14,955	3,065	300	18,000,000	1,500,000	9,000,000	0	4,162,500	13,162,500	75,000	600	45,000,000	58,162,500
VAMBAY and Urban Shelter													
MCT Slum	600	207	192						0	59,985	500	29,992,500	29,992,500
			VAMBAY - 60	3,600,000	300,000	1,800,000	0	2,664,000	4,464,000				4,464,000
			Urban Shelter - 120	5,400,000	600,000	0		1,665,000	1,665,000				1,665,000
NSDP													
Gulbarga Huts	1,385	277	277	13,850,000	1,385,000	0	6,094,000	5,484,600	11,578,600	87,120	500	43,560,000	55,138,600
TOTAL Rs.	22,985	4,616	1,588	92,760,000	7,880,000	35,370,000	6,094,000	25,339,725	66,803,725	467,130		235,620,000	302,423,725
TOTAL \$				1,855,200	157,600	707,400	121,880	506,795	1,336,075			4,712,400	6,048,475

Source: KSCB, Bangalore (March 2003) for columns with *; rest are authors' calculations.

Second, when the underlying value of the land in the programs is high, beneficiaries "cash out" because they prefer to consume less land and housing, and more of other things. This is not to argue that the slum dwellers should not be entitled to land and secure tenure, but rather that building low cost housing on high-value sites is likely to be an inefficient means of providing a *housing* subsidy to the poor. Measures such as beneficiary relocation, as was used in the MUTE in Mumbai, are worthy of further consideration^[23] as alternatives for providing an equivalent housing subsidy.

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[1] There is some degree of flexibility in how these programs are implemented at the State level. When discussing specifics of these programs, the paper will be referring to how these programs are implemented in Karnataka.

[2] Given the difficulties in using allocated funds and the widely variable spending patterns involved across states this figure must be viewed as a conservative approximation.

^[3] Using the urban poverty line of about \$120 a year for 1999/2000 (converted at Rs. 45 per dollar; World Bank, *Poverty in India: The Challenge of Uttar Pradesh*, May 08, 2002. Annex Tables A1.1) this level of assistance amounts to about 2.5 percent of the income of those at the poverty line. This level of assistance cannot improve much on what the poor are spending already.

^[4] *Tenth Five-Year Plan*, p. 625. *The Ninth Plan* was the first time that attention was given to urban poverty as a distinct policy issue. Previously, from a policy perspective poverty was synonymous with rural. The *Tenth Plan* continued and deepened the discussion of urban poverty and what needs to be done to improve these programs, giving particular emphasis to increased participation. Of course, there are other mitigating factors in determining the size of the subsidy needed, including how deep in poverty a household is, the cost of housing, and whether or not the subsidies are targeted on the poor. The observation in the text attempts to suggest that given the observed locational distribution of the poor there is an empirical question of whether housing subsidies are targeted on the poor or some other characteristic.

^[5] Marja C Hoek-Smith and Douglas Diamond (March 2003) and Stephen K. Mayo (1986) provide a more complete discussion of these and other measures to evaluate housing subsidies. The former paper is *The Design and Implementation of Subsidies for Housing Finance*. Prepared for the World Bank Seminar on Housing Finance, March 10 – 13, 2003; the latter appeared in the *Journal of Urban Economics*. PPS. 229-249.

^[6] <http://www.worldbank.org/oed/>

^[7] <http://www.ebrd.com/>

^[8] Such community groups existed under the Urban Basic Services for Poor (UBSP) scheme, and continued to operate under the Golden Jubilee Self-Employment Scheme (called SJSRY) that replaced UBSP.

^[9] In Karnataka, for instance, a particular notified slum is selected based on a survey which tries to find out whether the beneficiary will build a house if selected and whether they will repay the loan. The survey is conducted by the assistant executive engineer in the Slum Clearance Board. The program does not specify the design of the house.

^[10] All three programs/schemes are in operation in Karnataka. Two of them are assisted by GOI (i.e. VAMBAY and NSDP) and implemented by the Karnataka Slum Clearance Board (KSCB). Urban Shelter is a GOK scheme implemented by the Rajiv Gandhi Rural Housing Corporation Limited (RJRHCL).

^[11] The Kudumbashree is a women-based participatory poverty eradication program initiated by the Kerala Government. It comprises of a set of community-based organizations of women from poor households that has a semi-official organizational structure and runs in conjunction with local government bodies. At the lowest level are neighborhood groups (NHGs) that comprise of 15 – 40 families. These are primarily self-help groups that are often linked to thrift organizations and micro enterprises. Ten to fifteen NHGs are federated at the ward level to form the Area Development Societies (ADS). Finally, representatives from the ADS form the Community Development Society (CDS). The CDS is monitored and supervised by the representatives from the Local Government. The Kudumbashree program is multifaceted in that it uses this organizational structure to implement poverty eradication programs that range from human development, community health, micro finance, and now, micro housing.

^[12] It is estimated that the average cost of community toilet seat has been estimated to be Rs 40,000/- per seat. Therefore, a 10-seat or a 20-seat toilet block meant for men, women and children with separate compartments for each group and special design features will cost around Rs four hundred thousand or Rs eight hundred thousand respectively.

[13] The information on Nirmal Bharat Abhiyan was assembled from <http://www.kudumbashree.org/Guidelines/VAMBAY.htm> and a Government of India note on the VAMBAY program.

[14] Mayo 1999, p. 21.

[15] Published News accounts indicate recurrent instances of political interference and corruption in the selection of beneficiaries. The KSCB officials also admitted political interference in the selection of up to 10% of total beneficiaries.

[16] The prioritization of beneficiaries are as follows: 1) Freed bonded laborers, 2) SC/ST households (within this households who are victims of caste-based violence and/or households headed by widows or unmarried women get priority) 3) Non SC/ST households below the poverty line 4) Families and widows of personnel in the armed forces who are killed in action 5) Households displaced by other developmental projects.

[17] When civil society organizations assisted slum dwellers with housing finance and involved them in pre-project planning, repayment of loans has been almost 100 percent. In Kerala where the government targeted beneficiaries through local self-help groups, the repayment rates for the Mythri program were around 70 percent. Evidence from VAMBAY in Bangalore shows that ultimately, beneficiary participation not only improves repayment of loans, it also enhances beneficiary satisfaction due to participatory design.

[18] These subsidy rates include an implicit grant element that arises due to poor loan repayment performance. Annex 2 provides a simple illustration of how low repayment rates can increase the effective subsidy element in these housing programs.

[19] See Aaron and von Furstenberg (1971) for a discussion. Henry J. Aaron and George M. von Furstenberg, *The Inefficiency of Transfers in Kind: The Case of Housing Assistance*, Reprint 210, The Brookings Institution, Washington, DC, 1971. On the subsidies in developed economies, see Mayo, (1986) ob cit. that provides calculations for Germany and the US. On the per unit subsidy estimates for seven developing countries see Mayo and Gross, (1987) *World Bank Economic Review*. "The Economics of Low Cost Housing in Developing Countries", pps. 301-337.

[20] A deadweight loss represents the loss in resources involved with the distribution of a subsidy or imposition of a tax. In general, it is equal to half the subsidy rate times the responsiveness of the market participants. The measurement in the text assumes that the price elasticity of demand for housing services is equal to one, as found in the literature. An approximation of the loss is equal to the subsidy rate times half the elasticity. See Mayo (1986) for a comprehensive review of these calculations for the U.S. and Germany.

[21] This is the same figure reported by the Ramanathan Foundation Study (2002) for earlier years.

[22] For illustrative purposes, the paper assumes that there is no subsidy in the interest rate and free land (discussed elsewhere in the paper). When these are offered, this adds an additional subsidy element.

[23] The relocations under the Mumbai project are described in a number of SPARC documents and the circumstances leading to the relocation are by no means a proposed solution. However, the highly successful method of participatory decision-making leading to the relocations may provide a model for other programs.

References

Hoek-Smith, Marja C and Douglas Diamond *The Design and Implementation of Subsidies for Housing Finance*. Prepared for the World Bank Seminar on Housing Finance, March 10 – 13, 2003

Mayo, Stephen K., 1999 .“Subsidies in Housing”, *Sustainable Development Department Technical Paper series*. Washington, D.C.: Inter-American Development Bank.

Mayo, Stephen K. 1986. “Sources of Inefficiency in Subsidized Housing Programs: A Comparison of U.S. and German Experience.” *Journal of Urban Economics*. 20: 229-249.

Planning Commission India. 2002. *India's Tenth Five-Year Plan*.
<http://planningcommission.nic.in/plans/planrel/fiveyr/welcome.html>

Ramanathan Foundation, *Urban Poverty Alleviation in India* 2002.