RESETTLEMENT AS DEVELOPMENT?
UNDERSTANDING THE IMPACTS OF RESETTLEMENT AND REHABILITATION
IN THE MUMBAI URBAN TRANSPORT PROJECT (MUTP), INDIA

by

Ko Takeuchi

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Abstract

Displacement induced by urban development projects, is becoming an increasingly significant issue in rapidly growing cities with high proportions of 'informal settlements' or 'slums'. In the case of Mumbai, India, the Mumbai Urban Transport Project (MUTP), financed by the World Bank in 2002, included a Resettlement and Rehabilitation component with a Resettlement and Rehabilitation Policy, embracing the World Bank's Involuntary Resettlement Policy, to help restore the overall living standards of the displaced households. This paper, based on 48 face-to-face interviews with the displaced families, assesses the impact of this resettlement, by adopting the concepts and theories of "household assets" as developed by the discourse on international development. The evidence indicating decreased household assets raises questions about the World Bank's perspective of resettlement as 'development'. This research shows that the essential endeavor for consideration in such relocation projects is not only the change in the physical environment from low-rise villages to medium-rise apartments, but also the way by which the resettlers organize themselves to manage and maintain their new form of housing. Hence, the paper suggests that resettlement projects must make a stronger commitment to allow resettlers to shift in consolidated groups, with special support for the group members to learn and to cooperate with one another to maintain their new housing. With respect to the World Bank's involuntary resettlement policy, this paper argues that the interaction between efforts to consult with the public and strategies to prevent unauthorized capture of project benefits must be closely examined. In fact, the policy may be partially applied to restrain the strategies of local agencies to prevent such capture, as the policy may not always be congruent with the intricate systems of slum settlements. The conclusion and final recommendation is for relocation analyses to be extended beyond basic housing standards, to also evaluate economic, social, and hygienic repercussions, and their influences on one another.
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Last but not least, I would like to thank my family and friends who supported me throughout my masters program. Thank you very much.
**List of Abbreviations**

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<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tr>
<td>CBD</td>
<td>Central Business District</td>
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<td>JBIC</td>
<td>Japan Bank for International Cooperation</td>
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<td>JVLR</td>
<td>Jogeshwari-Vikhroli Link Road</td>
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<tr>
<td>MHADA</td>
<td>Maharashtra Housing and Area Development Authority</td>
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<td>MMRDA</td>
<td>Mumbai Metropolitan Region Development Authority</td>
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<td>MUTP</td>
<td>Mumbai Urban Transport Project</td>
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<tr>
<td>NGO</td>
<td>Non-governmental Organization</td>
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<td>OD</td>
<td>Operational Directive</td>
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<td>RIP</td>
<td>Resettlement Implementation Plan</td>
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<td>SCLR</td>
<td>Santa-Cruz Chembur Link Road</td>
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<td>SRA</td>
<td>Slum Rehabilitation Authority</td>
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<td>TDR</td>
<td>Transferable Development Right</td>
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<td>UN</td>
<td>United Nations</td>
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**Measurements**

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<td>km</td>
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<td>sq.ft.</td>
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**Currency**

Indian rupees per US dollar – 44.25 (February 2006)
1. Introduction

1.1. Research Problem

1.1.1. Resettlement under the Mumbai Urban Transport Project (MUTP)

According to recent projections by the United Nations (UN), within the next few decades, the majority of population increase will take place in the urban areas of what the UN categorizes as the “less-developed countries.” (Department of Economic and Social Affairs United Nations Secretariat 2002). Hence, the shift towards a more urbanized world and its ramifications on various aspects of those societies must be considered in planning research and policies. One of the ramifications is the need for cities with rapid population growth to invest in new infrastructure and provide amenities, such as clean drinking water, sewage treatment plants, energy for industries, as well as wider roads, hospitals, or schools in residential areas, to serve the increasing population, and to maintain and improve the quality of life. These infrastructure projects underpin the physical and economic growth and enhance health conditions, but also accompany changes in land use and, most importantly, the displacement of residents.

The displacement of a population, caused by development projects, is increasingly becoming a significant issue in cities with a high proportion of 'squatter settlements' or 'slums' occupying public or private land, where many of the low income residents are

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1 'Slum' is a problematic term, since it seems to connote different meanings in different disciplines, countries, and times. In the international housing literature, the term is also associated with and/or distinguished between 'informal settlements' and 'squatter settlements,' along with many local terms such as 'favelas' in Brazil, 'barriadas' in Peru, or 'kampungs' in Indonesia. In the case of India, the number of "slum populations" is enumerated in the census with different definitions for each state. For example, the state government of Maharashtra defines slum as areas where buildings are unfit for human habitation for reasons such as dilapidation, overcrowding, faulty arrangement of streets, and lack of ventilation, light or sanitary facilities (Government of Maharashtra 1971). Sometimes, as with the case in Mumbai, being designated as a "slum...
vulnerable due to insecure tenure and lack of access to urban services. When slum dwellers are forced into resettlement, they face severe changes in the sources of their livelihood, frequently resulting in further impoverishment. Not only do they lose their previous homes, often with inadequate or no compensation to afford a new one elsewhere in the city, but they are also resettled far away from the central business districts (CBD) and thus lose their ready access to jobs and optimal locations for small businesses, along with access to basic services and site-related social networks (Cernea 1993b). The World Bank (1996) reported that an estimated 550,000 people were displaced by transportation, water supply, and urban projects financed by the World Bank during 1986-1993, which is only a small percentage of the total population relocated by urban projects of the same kind throughout the world.

In the case of the Mumbai urban agglomeration, which is the financial and commercial capital of India, its population is estimated to add some 6 million people in the next 15 years, from 16 million in 2000 to 22 million in 2015 (Department of Economic and Social Affairs United Nations Secretariat 2002). Greater Mumbai – the central and most densely populated district of the Mumbai Metropolitan Region – alone accommodates about 12 million people in just 468 sq. km. According to the 2001 Census of India, half of Greater Mumbai's residents live in settlements designated by the government as "slums." In addition, Greater Mumbai has the most difficult infrastructure problems in urban India, and the capacity and quality of urban transport is widely known to be at a crisis level, with

dweller” has a specific implication to the dweller, as they may be eligible for slum rehabilitation schemes and receiving ration cards. To give another example, the Expert Group Meeting of UN-HABITAT defines a "slum household" as “a group of individuals living under the same roof lacking one or more of the conditions below for operational use: access to improved water, access to improved sanitation facilities, sufficient-living area, structural quality/durability of dwellings, and security of tenure” (United Nations Centre for Human Settlements 2003b, p.18). In this paper, I use the term slum to refer to a type of settlement somewhat similar to the one defined by UN-HABITAT, since the intention here is to delineate and examine the adverse impacts from displacement on residents who lack access to basic urban services and/or secure tenure, which often leads to the vulnerable aspects of their livelihood.
Based on this background, the World Bank identified infrastructure bottlenecks as one of the major constraints to alleviate poverty in its Country Assistance Strategy, and financed a project in 2002 called the Mumbai Urban Transport Project (MUTP) (The World Bank 2002a). The objective of this project is to "facilitate urban economic growth and improve quality of life by fostering the development of an environmentally and financially sustainable urban transport system including effective institutions in the Mumbai Metropolitan Region" (The World Bank 2002b, p.4). Nevertheless, since many of the slum settlements located along railway tracks and on public lands, became 'obstacles' for this transport project, plans were included to resettle the affected population of up to 120,000 people. This displacement is the focus of my research.

1.1.2. Impacts of urban resettlement on displaced households

Urban resettlement has various direct and indirect impacts on the means of living for the displaced households. The literature review below made attempts to contextualize the impacts of resettlement, specifically in urban areas, since the context of people's lives and sources of livelihood, and the urban resettlement processes and policies are often different from rural ones (Mejia 1996, p.5-7; Rakodi and Lloyd-Jones 2002).

Income and financial assets

The most common way in which the impact of resettlement in both urban and rural

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2 According to the initial socio-economic survey of those likely to be affected and displaced, more than 99% were squatters and did not have any tenurial rights to the land they were occupying (Mumbai Metropolitan Region Development Authority 2002a, p.13).
settings has been expressed and measured, is the change in household income. The World Bank reported that cases of unsatisfactory income restoration are more frequent than satisfactory outcomes, with its projects from 1986 to 93, and that, in some cases, as much as 40% of the populations that were poor, even before displacement, had declining income (The World Bank 1996, p.109).

Although measuring and assessing the decrease of income standard is crucial, many researchers in the international and community development field, dealing with both rural and urban poverty, have in some way criticized the static and narrow conceptualization of poverty and impoverishment (which is well illustrated by the poverty-line analysis), and have emphasized the multi-faceted and dynamic aspects of the concept (Chambers 1989; Friedmann 1992; Moser 1998; Sen 1981, 2000). Accordingly, the wider aspects of the impact of relocation on various earning capacities and assets must be further explored.3

Housing

One type of impact on urban residents that is caused by resettlement in urban areas is due to housing, and its various implications within the concept. While the importance of land as a productive asset in rural areas has long been considered (Cernea 2000), recent research indicates that housing ownership is by far the most important productive asset of the urban poor (Moser 1998; Rakodi 1999). First, housing is where socializing and life-supporting activities take place, enabling households to maintain and enhance other assets such as labor power (Friedmann 1992). Second, housing is considered

3 I recognize that other frameworks may be used to capture the multi-faceted nature of poverty, such as the Sustainable Livelihoods approach of the Department for International Development (Carney 1998). This research, however, is intellectually indebted to Caroline Moser’s work on the asset vulnerability framework based on urban settings and livelihoods, because of its relative ease to contextualize and for its appropriateness for evaluating urban relocation.
as a productive asset, as home ownership provides opportunities for home-based enterprises (Moser 1998), which are important for home-bound women to contribute to household income (Tipple 2005).

In addition, the literature on low-income housing suggests that security of tenure facilitates investment in housing improvements, and hence, granting legal tenure to squatters was promoted under initiatives like the World Bank's Slum Upgrading Program (Friedman, Jimenez, and Mayo 1988; Malpezzi and Mayo 1987; The World Bank 1993). Other authors are dubious about policies oriented exclusively towards granting legal title and argue that the tenure security *perceived* by occupants is more relevant. In addition, perceived tenure security depends on a mixture of factors such as the size of settlement, political protection through contacts and/or votes, and level of provision of services by authorities (Angel 1983; Payne 2002). Hence, the ramifications and effectiveness of the change in the displaced household's tenure status are crucial when analyzing a relocation project.

Equally important are the changes in the characteristics of housing that can cause harm to the household's income/expense and health. For instance, whether low-income residents prefer low-rise housing or high-rise apartments is one of the popular debates in the literature (Hamdi 1991; Perlman 1976; Turner 1976). The argument claiming the former is supported by observations of slum dwellers favoring the variety of owner-built houses with doors always open during the day to enhance social intimacy, and the nature of their income-generating activities such as raising chicken in the yard, or providing meals under the eaves. On the other hand, Mukhija reports that slum dwellers in Mumbai tend to prefer the upper stories in their new medium-rise apartments (Mukhija 2002, 2003). Extra
burdens may be imposed on women's already limited time, energy, and resources in their responsibilities for domestic chores, in settlements having an inadequate access to running water and sewerage systems (Bapat 2003; Beall 2002; Moser 1987a, b). In addition, the United Nations Centre for Human Settlements (2003a) reported that people without a connection to clean water must pay high unit prices for water through water vendors. Housing can also negatively affect health if the conditions are, for instance, overcrowded, unhygienic, close to industrial and traffic pollution, or lacking sufficient water/sanitation facilities. As an additional consequence, harm to physical health may lower educational achievement and the ability to earn income.

**Accessibility to business districts and basic services**

Studies on impoverishment caused by relocation have identified mainly two types of loss of accessibility. One is the loss of the opportunity for jobs and economic activities, caused from relocation further away from CBDs (Hardoy and Satterthwaite 1989; Misra and Gupta 1981; Peattie 1968; Turner 1976; United Nations Centre for Human Settlements 2003a). Many residents in slums generate their income through jobs and economic activities in a strong relation to the advantageous nature of CBDs. These include unskilled/labor-intensive factory work, domestic services, and economic activities, often referred to as the 'informal sector'. Relocations to areas that are further away from the CBDs have the risk of

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4 The informal sector usually refers to jobs and to those who engage in small-scale economic activities such as: vending on streets (i.e., selling daily goods, food, and cooked meals); auto-repairing; domestic labor (i.e., servants and guards); domestic industry (i.e., shoe-making and sewing); private transport-related work (i.e., cart pullers); and 'scavenging' or garbage collecting for recycling. Many attempts have been made, since the early-70's, to define the concept. For instance, the International Labor Organization identified informal sector enterprises as containing the following attributes: ease of entrance, reliance on indigenous resources, family ownership of enterprises, small-scale operation, labor intensive and adapted technology, skills acquired outside the formal school system, and unregulated and competitive markets (International Labour Office 1972). In any case, no consensus seems to be available as to the academic definition of the concept, since the concept came about from immediate observation of labor in the rapidly urbanizing countries.
depriving resettlers of their opportunities to such jobs and economic activities. For instance, domestic servants may lose their jobs since the commuting distance escalates. Retail shops and street vendors may lose their income due to fewer customers and/or suppliers around their new settlement. Furthermore, the fare to commute on buses and trains may increase, resulting in higher cost of living expenses.

The displaced population’s increased time to travel may consequently eat up the ‘surplus’ or the free time available to households. Friedmann (1992) argues that the lack of free time constrains household options and is one of the elements of “disempowerment.”5 Not only do increases in travel time occur in commuting to jobs, but also in using public facilities such as hospitals, schools, or religious facilities. This is often observed after displacement, as facilities that are close to the new settlement do not usually have adequate capacity and resource to serve the increased number of users, compelling the displaced population to use facilities at other locations.

Social assets

The impact on social aspects of the displaced households is often overlooked, as with the Involuntary Resettlement Sourcebook of the World Bank (The World Bank 2004a). Regardless of whether public or private land owners are forcing residents to resettle, the displaced community is not treated as a social unit, but as an aggregation of individuals and families. In a displacement, little attention is paid to the social structure of the community, and the various impacts of resettlement on the social networks within a community – often associated with the concept of ‘social capital’6 – is rarely discussed in the literature on urban

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5 Friedmann refers to “disempowerment” as a lack of access to social power to improve the condition of those in poor households (Friedmann 1992, p.66).

6 While the discourse on social capital has spread into many different fields, ranging from sociology...
development policy, or considered in practice.

Researchers have emphasized that social networks within poor neighborhoods and communities play an important role as an asset (Douglass 1998, p.126; Eames and Goode 1977; Friedmann 1992; Narayan 2000). This is often practiced in the form of a ‘moral economy,’ through the exchange of goods and services among people on the basis of reciprocal relationships, as within family and/or patron and client relationships.\(^7\) The social networks include child/elderly caring among neighbors, the lending and borrowing of daily goods, sharing of food costs, helping those who are constructing new homes, and obtaining information on the casual labor market\(^8\) (Beall 1995; Douglass 1998, p.126; Eames and Goode 1977, p.131; Friedmann 1992; Lomintz 1977, p.133-34; United Nations Centre for Human Settlements 2003a, p.150).

Another aspect of social capital is the nature of relationships within the network that promote positive collective action, and which are often labeled as the “cognitive” component of social capital, as opposed to the “institutional” component that is comprised of tangible actors and organizations (Krishna and Uphoff 1999). The nature of relationships among members of the social network, which promote collective action vary according to each case, but some are identified in the literature as being: trust, norms of reciprocity,

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\(^{(Paxton 1999)}\) to economics (Stiglitz 1990, 2000), for the purpose of this research, I define the term as ‘social networks and relationships that can be mobilized for the exchange of goods, services, and collective action’.

\(^7\) The theory of the “moral economy,” which highlights the social embeddedness of economic activities and exchange, is frequently discussed in economic anthropology, stemming from the work of Karl Polanyi (Polanyi 1977).

\(^8\) In fact, both internal and external linkages involving a community, prior to, during, and after the actual resettling, play important roles for people to access information about resettlement through social networks. The displaced population may hear news about a relocation through neighbors, prior to any other source, and before hearing it from the formal institutions (Hosaka and Ogura 2001, p.101).
sharing of information, social sanction, and psychological proximity (Besley and Coate 1995; Lomintz 1977; Putnam 1993). When a social network is shaped by such factors, powerful effects may occur such as the creation of a rotary credit association,\(^9\) which can act as a safety net and financially support families in a period of crisis (Lomintz 1977). The magnitude and type of community cohesion is considered to be dynamic and influenced by various external circumstances (Moser 1996). Social networks are also emphasized more in rural settings (Garikipati 2005; Narayan 1997; Rakodi 1999), though their importance should never be disregarded.

In summary, the issues that are relevant in the analysis of relocation pertain to changes in housing, accessibility, and social asset, and the various repercussions that these changes have on health and income/expense. Changes in housing may involve the tenure status of resettlers and influence housing improvement, with social and economic implications due to the shift from low-rise to high-rise settlements. Changes in the accessibility to jobs and services are likely to affect income and expense. Changes in social networks may influence one's job opportunities and ability to manage housing and common properties. When families were accommodated in resettlement sites, these negative repercussions on household assets and the subsequent inability and reluctance to pay long-term installment, frequently compel families to move out of the resettlement sites. In such cases, families usually seek other places on which to squat, and the dwellings in the resettlement sites become occupied by higher-income residents, or controlled by brokers.

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\(^9\) Rotary or revolving credit associations, or revolving funds, can take various forms. One example is a group with 20 members who each pay 1 dollar a month into a pool. If one member needs a large amount of money for marriage, buying furniture, investing in new equipment for a new business, etc., that member can receive the total reserve fund of 20 dollar for that month. These kinds of revolving funds are often mentioned in association with micro-finance schemes in the international development literature, since they are both influenced and shaped by the social relationships among members.
1.1.3. The World Bank's policy on involuntary resettlement

Based on the risks of harming displaced households, the opinions of scholars are divided on project-induced displacement (Dwivedi 2002). As deWet (deWet 2001) put it, the "more optimistic" position argues that corrective action can, in principle, overcome the problems resulting in resettlement, while the "more pessimistic" approach views that the complexities inherent in the resettlement process create sets of problems which are not readily amenable to operationalisation and predispose failures.

The World Bank, the most well-known multilateral institution that funds development projects involving resettlement in both rural and urban areas, views development as being essential, and believes that problems arising from displacement can be overcome, to justify project-induced displacement:

It is clearly unrealistic to reject all resettlement. Developing nations cannot forego the benefits of major infrastructural investments that also entail unavoidable population relocation. The question is how to minimize the size of displacement and how to respond effectively to the needs of the people being resettled. (The World Bank 1996, p.78-79)

Therefore, the World Bank's vision is to minimize the negative impact of displacement by providing safeguards and to prevent risks, as Cernea\textsuperscript{10} proposes, by "put[ting] in place sets of procedures, backed up by financial resources, that would increase equity in bearing the burden of loss and in the distribution of the benefits." (Cernea 2000,

\textsuperscript{10} Michael M. Cernea is the World Bank's first in-house sociologist, joining the World Bank in 1974 and serving as the Bank's Senior Advisor for Sociology and Social Policy until 1997.
As a response to external pressure by international environmental movements, as well as the internal awareness of the negative consequences from its projects (Cernea 1993a; Kardam 1993), the World Bank issued its first policy on displacement entitled: *Social Issues Associated with Involuntary Resettlement in Bank-Financed Projects* (Operational Manual Statement 2.33) in 1980, as the first policy framework on displacement enacted by a multilateral institution\(^{11}\) (Cernea 1988). In 1990, the resettlement policy was revised and reissued as Operational Directive on Involuntary Resettlement (OD 4.30) along with updates to all previous internal policy and operational guidelines\(^{12}\) (The World Bank 1990).

This was preceded by the well-know Narmada Sardar Sarovar Project in India in the late-1980's, which significantly highlighted the 'gap' between policy and performance, because it had no resettlement plan when the Bank approved the loan (Rich 1994). The key elements of 1990 OD 4.30 are summarized below:

- Involuntary displacement should be avoided or minimized whenever feasible, because of its disruptive and impoverishing effects.
- Where displacement is unavoidable, the *objective* of Bank policy is to assist displaced persons in their efforts to improve, or at least restore, former living standards and earning capacity. The *means* to achieve this objective consist of the preparation and execution by the Borrower of resettlement plans as development programs. These resettlement plans are integral parts of project designs.

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\(^{11}\) Before the policy was formulated, the Bank admitted that its projects dealt with displacement on a "case-by-case basis" and was "entirely left to borrowing agencies, with little, if any Bank assistance" (The World Bank 1996, p.81).

\(^{12}\) The Operational Policies 4.12 (The World Bank 2001b) and Bank Procedures 4.12 (The World Bank 2001a) that were issued in December 2001, together replaced OD 4.30 from projects in which a Project Concept Review had taken place on or after January 1, 2002. This may have been based on many findings from the Bank-wide review, carried out between January 1993 and April 1994 by a Task Force headed by Michael Cernea, jointly with the regional departments, as well as the evaluation done by the Operations Evaluation Department (Operations Evaluation Department 1998; The World Bank 1996).
• Displaced persons should be: 1) compensated for their losses at replacement cost, 2) given opportunities to share in project benefits, and 3) assisted in the transfer and in the transition period at the relocation site.
• Moving people in groups can cushion disruptions. Minimizing the distance between departure and relocation sites can facilitate the resettlers' adaptation to the new socio-cultural and natural environments.
• The tradeoffs between distance and economic opportunities must be balanced carefully.
• Resettlers' and hosts' participation in planning resettlement should be promoted. The existing social and cultural institutions of the resettlers and their hosts should be relied upon in conducting the transfer and reestablishment process.
• New communities of resettlers should be designed as viable settlement systems equipped with infrastructure and services, able to integrate in the regional socio-economic context.
• Host communities that receive resettlers should be assisted to overcome possible adverse social and environmental effects from increased population density.
• Indigenous people, ethnic minorities, pastoralists, and other groups that may have informal customary rights to the land or other resources taken for the project, must be provided with adequate land, infrastructure, and other compensation. The absence of legal title to land should not be grounds for denying such groups compensation and rehabilitation.

(The World Bank 1996, p.83)

Recent position of the World Bank regarding involuntary resettlement is that relocation in urban setting provides innovative possibilities to lessen severity of its impacts. Moreover, the Bank states that “where urban living conditions are substandard, resettlement can be designed to enable poor and vulnerable urban populations to benefit from their displacement.”(The World Bank 2004a, p.289) In sum, it sees opportunities for resettlement as a form of development for the resettlers, through improvements in living conditions, especially in their housing standards.

The MUTP adopted this OD 4.30 of the World Bank’s involuntary resettlement
policy and included a Resettlement and Rehabilitation component that aims to assist the overall living standards of the displaced population. The World Bank has a prerequisite requirement for financial loans, in that governments produce a resettlement policy and action plan for the population that is affected by any project involving resettlement. Therefore, the Government of Maharashtra, of which Mumbai is the capital, appointed a Task Force to prepare the Resettlement and Rehabilitation Policy to assist the Government in determining the institutional arrangements and implementation strategies for the resettlement. Following the adoption of the Policy, the Mumbai Metropolitan Region Development Authority (MMRDA) - the main implementing agency - prepared an action plan for resettling the population affected by the project, which describes the actual implementation process and institutional framework for carrying out the relocation. The objectives of this resettlement project are “to prevent adverse social impacts associated with implementation of the Project and to deliver the entitlements of the displaced population for payment of compensation and support for re-establishing their livelihood” (Mumbai Metropolitan Region Development Authority 2002a, p.17).

According to this Resettlement and Rehabilitation Policy, every eligible household losing a dwelling or commercial structure is to be allotted an alternate site for a dwelling or commercial structure (Mumbai Metropolitan Region Development Authority 2002a). Eligible households included those without legal title to the land they occupy, such as squatters and pavement dwellers. Formal housing right is provided in the form of a leasehold right of land to the cooperative society comprised of displaced families, and occupancy right of built floor space. The resettlement site is also provided with on-site amenities, such as recreational open space, balwadis (kindergartens), water supply,
sanitation, and pathways, according to the state's regulations. Resettlement sites are to be selected from the feasible alternatives in consultation with the affected communities. Compensation for economic losses is provided to workers/employees who permanently lost their source of livelihood because of displacement, and to workers/employees whose travel distance increased in excess of 1 km. The cost of shifting is paid or free transport arrangements are made available to the displaced persons. Vulnerable households such as those headed by a woman, or the handicapped or the aged are to be provided with an additional package of rehabilitation services to help overcome the difficulties caused by resettlement. If the social and economic linkages are substantially affected, the remaining people, whose proportion does not exceed 20% of the displaced population, can resettle along with the directly affected people. Furthermore, a community-operated, revolving fund is to be created with the assistance of local non-governmental organizations (NGOs) to provide access to credit for income-generation and other possible needs. This resettlement scheme was described by some observers as "unusual" and "innovative" for increasing participation of the resettled people in designing, planning, and implementing the resettlement program (Patel, d'Cruz, and Burra 2002; Reddy 2000).

Nevertheless, four requests for inspection have been submitted to the Inspection Panel by six local associations in Mumbai, claiming on behalf of the displaced households

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13 Some of the standards that are mentioned in the Development Control Regulations are: recreational open space at 15% of the plot area, water supply at 135 liters per capita per day, one balwadi (kindergarten) of 225 sq. ft. (20.9 sq.m.) for every 100 dwelling units, and minimum width of pathway to be 1.5m (Mumbai Metropolitan Region Development Authority 2002a, p.26).

14 The idea of creating a community-operated fund with the assistance of NGOs, which could be linked with community saving programs is stated in the resettlement policy of the Government of Maharashtra, the Resettlement Action Plan, and some site-specific Resettlement Implementation Plans (RIPs). For example, in the case of one RIP, the proposal is made that the project contribute 1000 Rs. for every displaced household to the revolving fund and that this contribution will then be used to leverage other grants and subsidies from schemes of the Government of India that deal with urban poverty (Mumbai Metropolitan Region Development Authority 2002b).

15 The Inspection Panel, created in 1993, serves as an independent mechanism for the World Bank's
that some of the requirements under the World Bank's involuntary safeguard policy OD 4.30 have not been followed, which will likely have an adverse impact on the outcome of this resettlement. One of these associations claimed,

that our rights to participation and consultation were effectively denied and that our attempts to raise our concerns were not successful. In particular, we claim that the failure to provide income restoration would result in significant harm. This failure would destroy our livelihoods, causing us to dismantle our productive sources and cause our supporting networks and kin groups to disperse. (The World Bank 2004b, p.2)

Considering the possible impacts on the displaced households and the policies and measures devised to prevent them, the most pertinent question of this research is:

*How have the relocation and the Resettlement and Rehabilitation Policy, implemented through the Project, affected the assets of the displaced households?*

Since the Resettlement and Rehabilitation Policy is shaped by the World Bank's involuntary resettlement policy, a series of sub-questions are also addressed in this thesis:

*What were the implications of the World Bank's involuntary resettlement policy (OD 4.30) on the implementation of Resettlement and Rehabilitation? How reasonable was the World Bank's vision of "resettlement as development" in the case of the MUTP?*
Lastly, I elaborate on the potentiality and meaning of incorporating the asset-based framework for evaluation of resettlement, by asking:

*How relevant is the asset-based framework for evaluating relocation? What are its advantages and disadvantages?*

### 1.2. Research Rationale

This research is significant since infrastructure projects that accompany the relocation of residents in urban areas will continue to be conducted and financed in rapidly urbanizing countries, although considerable scope exists for seeking more suitable ways to replace or, at least, compensate conventional infrastructure projects. With this background in mind, the pertinent and most productive approach would be to investigate *how* to minimize adverse impacts as well as to create an environment in which resettlers do not suffer from the adverse impacts. Thus, my intention is to focus on *how* resettlement was implemented rather than to ask *whether or not* it should have been implemented.

Some may argue that displacement manifests a developmental crisis, and may question any development that displaces; hence, asking *if* such development should occur in the first place, when the cost is the resettlers' impoverishment. My position is that the choice

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16 Observers have emphasized that conventional urban environment upgrading projects are not financially feasible for cities with large proportions of low-income residents, and that participatory and progressive development with the assistance of municipalities and NGOs is more effective, especially for providing infrastructure in areas with low-income residents (Kidokoro 2000). The success of the latter approach is well demonstrated by examples such as the Kampung Improvement Project in Indonesia, the Orangi Pilot Project in Pakistan, the Community Mortgage Program in the Philippines, and the Community Organization Development Institute (formerly called the Urban Community Development Organization) in Thailand (Chiguill 1996, 1999; Kidokoro 2000).
should be up to those involved in decision making, when it turns out that policies and devices cannot prevent resettlers’ impoverishment. Such decision requires a resolution from within the society, and not be made by a single ‘expert,’ a political ruler, a planner, or an anthropologist (Sen 2000). Accordingly, as a researcher of the case of development issues in Mumbai, India, my contribution is to provide some useful information for those who may be involved in development-related decisions, and not to evaluate whether or not this development project should have taken place.

With this view in mind, this research is especially significant because of the increasing number of resettlement projects in urban areas. Although resettlement is often attracting attention from dam construction projects in rural areas, research based on urban resettlement is still relevant. Dam and reservoir projects are the most frequent causes of displacement, accounting for 63% of the people displaced by World Bank projects, between 1986 and 1993. However, the number of projects dealing with transportation, water supply, and urban development, involving resettlement, have increased during the same period to represent 51% of the World Bank’s projects with resettlement (The World Bank 1996). Nonetheless, studies on resettlement related to urban development and infrastructure in the developing part of the world are relatively new and scarce, compared to the traditional accumulation of knowledge on dam displacements or urban displacements in industrialized countries (Cernea 1989, 1996). Moreover, the World Bank has not yet conducted a systematic assessment of urban displacement (Mejia 1996).

Second, the resettlement safeguard policy of the World Bank has a substantial influence on other funding agencies that provide loans for projects involving resettlement. For instance, the Asian Development Bank draws intensively upon the World Bank’s
approaches and policy for resettlement due to the latter's long-standing experience in funding such projects (Asian Development Bank 1998, p.2). The World Bank's policy may also influence bilateral funding agencies, such as the Japan Bank for International Cooperation (JBIC), whose Environmental and Social Guidelines, 2002, still seem to fall short of the more precise and detailed guidelines of the multilateral agencies mentioned above. This view is especially pertinent to this research since the MMRDA is considering changing its funding source from the World Bank to the JBIC, to avoid any 'stringent' involuntary resettlement policy (Deshmukh 2006).

Third, few studies in the literature have examined how the policies and processes of resettlement contribute to the success or failure of relocation projects. Therefore, by assessing the impact of the World Bank-funded resettlement, in the MUTP, this research derives meaningful lessons for governments, international funding agencies, NGOs engaged in housing issues or policy advocacy, and researchers. The underlying goal, in this regard, is to eventually benefit the potential resettlers in future projects.

1.3. Research Method

1.3.1. Method for evaluating the Project

This research was undertaken by using a comparative case study method that

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17 For example, baseline socio-economic surveys, which look at the living conditions and socio-economic statuses of displaced households, were one of the World Bank's requirements for the MUTP. According to a JBIC officer at the NGO-JBIC Periodic Conference, however, the JBIC is not aware if all of its projects conducted pre-resettlement surveys of the living conditions of the displaced population to allow for the assessment of recovery after resettlement (Japan Bank for International Cooperation 2004). For a critical analysis of JBIC's Environmental and Social Guidelines, see Protect Yourself from Destructive Development (Fukuda and Ohashi).
looked at three resettlement subprojects: 1) a subproject comprised of households displaced into a permanent resettlement site in 2000; 2) a subproject comprised of households resettled into transit camps in 2000-2001, and then resettled into a permanent site in 2004; and 3) a subproject comprised of households resettled into a permanent site in 2005 (Figure 1.1.). This comparative framework is relevant to this research for two reasons. First, those who resettled to transit camps have stayed for 3 to 4 years in accommodations of considerably low quality, and this situation could have strongly influenced the displaced families. Second, it provides more scope for the analysis of the effectiveness of monetary compensation by comparing those who had recently moved and thus had not received compensation, with those who were given compensation a few years before.

![Figure 1.1. Conceptual diagram of three sampling strata related to three resettlement processes.](image)

18 According to the Resettlement Action Plan of the MUTP, dwelling units at the transit camps are 120 sq.ft., with common toilet facilities (1 WC for 6 dwelling units) and stand posts for water supply (1 water tap for 10 dwelling units) (Mumbai Metropolitan Region Development Authority 2002a, p.40).
Different evaluation methods may be used according to what is being compared. In fact, this research intends to take advantage of some well-known project evaluation methods.

Comparisons with past resettlement projects

An evaluation may compare one project with past resettlement projects, to determine whether the project is relatively successful or not. Nevertheless, the contextual dissimilarities of these cases restrict the selection of 'appropriate' projects for the comparison. For example, should a case chosen for comparison have adopted the same resettlement policy of the World Bank or could any project funded by the Bank be chosen? How much should the rural/urban context influence the impact of resettlement and accordingly, the evaluation of the project? Moreover, since this methodology can only evaluate a project in relative terms, the project would be deemed to be 'successful' if its outcomes were better than the outcomes of other cases, even if, for instance, the household income of the resettlers was not restored.

Measuring the project against the resettlement policy

Another possible method to evaluate a resettlement project is to measure it against the Resettlement and Rehabilitation Policy and to investigate the extent to which the project achieved the initial objectives set out in the Policy. Although the Policy aims at restoring or improving the overall living conditions of the resettlers, simply measuring the resettlement project against the Policy intrinsically assumes that the complete implementation of the Policy would be sufficient for its objectives. For instance, this approach would postulate that providing identical 225 sq. ft. dwellings to the resettlers – a requirement of the Policy – is adequate for restoring and improving their living conditions.
Impoverishment Risk and Reconstruction model

One evaluation method, which is prevalent in many involuntary resettlement studies in anthropology and sociology, is the Impoverishment Risks and Reconstruction model (Cernea 2000). This conceptual model, which "focuses on the social and economic content of both segments of the process: the forced displacement and the reestablishment" (Cernea 2000, p.18), identifies impoverishment risks such as landlessness, joblessness, and homelessness. It then attempts to examine strategies to prevent such risks and to reconstruct resettler's livelihoods through, for example, land-based resettlement for "landlessness" or re-employment in resettlement sites for "joblessness." Nevertheless, the identification of risks, in terms of landlessness, homelessness, and joblessness, is superficial, and the strategies to recover from such losses in terms of providing land, jobs, and houses, are technical. Furthermore, this method does not consider interactions between the impoverishment risks, and how the adverse impacts on resettler's livelihoods can affect each other.

"Resettlement as development"?

After pointing out the advantages and limitations of some of the evaluation methods, I now intend to formulate and adopt a new method that overcomes the above limitations. First of all, the evaluation method should include references to the objectives of a resettlement project, and should allow the research to see whether or not the project achieved its initial intensions. Since the fundamental goal of the World Bank's resettlement policy was to shift from a mere compensatory approach to a "development-oriented" outcome (The World Bank 1996), and the goal of the Project was to improve the "former living standards, earning capacities, and production levels" of the displaced persons (Mumbai
Metropolitan Region Development Authority 2002a), the fundamental measure in this research should assess the extent to which the project developed and improved the overall living standards of the displaced persons. Moreover, urban resettlement, according to the World Bank, "can be designed to enable poor and vulnerable urban populations to benefit from their displacement" (The World Bank 2004a, p.289). An intensive review of the concepts and theories of 'development' is beyond the scope of this research; however, from my earlier outline of the evolution of the conceptualization of poverty, the pertinent interpretation of 'development,' in this context, is for investigating how the project enhanced the people's earning capacities and diverse assets (Appendix 1).

Second, the approach was chosen to compare current with pre-resettlement conditions. This method, however, has been criticized since it fails to capture the "development curve" of the displaced households (Pearce 1999). For instance, if the household income was increasing dramatically before resettlement, a compensation that restored it to the pre-resettlement level would imply that resettlement had an adverse effect on the household. By using a 'without resettlement' scenario, the crucial limitation of the previous method can be overcome, as it would account for the 'development curve' of households as if they had not been resettled. This approach, however, is limited in that it is extremely difficult to predict the 'without resettlement' case, even when researchers consider just a single quantitative indicator (i.e., household income), let alone a variety of dimensions of household assets, as in this research.  

Some methods take into account a 'development curve' as well as the values of non-marketed goods in compensation packages (Garikipati 2005; Pearce 1999). For example, the Contingent Valuation Method is a survey technique used by social scientists that asks resettlers directly about their willingness to accept compensation for resettling. This method is useful for comparing the relative appropriateness of different compensation packages, but is not suited to post-project evaluation, which must emphasize measures that were actually implemented. Therefore, I exclude this approach from this research.
how household assets have changed from the 'before resettlement' situation to the 'after resettlement' situation, due to the relocation under the Project.

A potential weakness in using a framework based on household assets, as expressed by Meikle, Ramasut and Walker, is that "...the household actions that indicate vulnerability are also attempts to increase security"(Meikle, Ramasut, and Walker 2001, p.29). This is strongly associated with the concept of "coping strategy," that is, a household's manipulation of assets and how they might be used to cope with external risks and crises (Rakodi 1995). The growing participation of women in the labor force, for instance, can indicate that the household is becoming more vulnerable, or be a strategy to reduce different types of vulnerability, such as a lack of household income at the same time. One of the complexities in evaluating a relocation project is that some indicators of social assets, such as "community leadership" or "community social solidarity," become increased after resettlement, as was seen in past resettlement projects (Hosaka and Ogura 2001). It would be misleading, however, to regard this kind of outcome as an achievement of the resettlement, if such actions were due to the people's strategy to cope with the difficulties of relocation. For this reason, I included open-ended questions in the interviews to probe the reasons for certain household assets changing as they did.

1.3.2. Sampling method

The population of interest for this research is the households displaced under the MUTP, that were previously in residential and residential-cum-commercial structures, and which amounted to 20,118 households20 (International Bank for Reconstruction and Development and International Development Association). This group included households in residential structures, residential-cum-commercial structures, and commercial structures to be relocated.

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20 The project identified approximately 23,000 households that were affected by its implementation (International Bank for Reconstruction and Development and International Development Association). This group included households in residential structures, residential-cum-commercial structures, and commercial structures to be relocated.
Development and International Development Association). A two-stage cluster sampling was adopted for this research (Figure 1.2.). The primary sampling units, or clusters, were the individual relocation subprojects comprised of displaced households (ranging in number from 3 to 3,528), stratified by the 3 different processes of relocation described previously. A sample weighting technique, which assigns each cluster (i.e., subproject) a probability of selection that is proportionate to the number of cases (i.e., households) in the cluster, was used to account for the difference in the number of displaced households for each resettlement subproject. Finally, 16 households were randomly sampled from each relocation subproject. Since the original occupants of many of the dwellings were not available for interview, additional samples were randomly chosen to replace the unavailable households. In the end, the total number of households approached was 94, of which 48 households were actually interviewed. The selected clusters or subprojects were the Optimisation of Harbor Railway Line subproject that resettled to Mankhurd in 2000, subproject shifting families to the Wadala transit camp in 2000-2001 and to Anik Runwal resettlement site in 2004, and the Jogeshwari-Vikhroli Link Road (JVLR) subproject that shifted families in 2005 (Appendix 2).

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21 For instance, a relocation subproject comprising 100 households would be given a probability of being chosen that is twice the probability of a relocation subproject comprising 50 households.

22 A list of the displaced households, from which the households were sampled, is available at the MMRDA Web site. The list includes 746 households for JVLR, 1426 households for Mankhurd, and 1477 households for Anik Runwal (Mumbai Metropolitan Region Development Authority). To consider only those families that have established their new lives in the resettlement site, families that resettled within the six-month period before this research were excluded from the sample.
Some issues regarding sampling

In this research, the adoption of non-probability sampling was considered to be less relevant. Although a non-probability technique could be used in the early stages of investigating a problem (Singleton and Straits. 1998, p.157), this research is at a stage of testing hypotheses that are derived from empirical evidence accumulated from past urban resettlement projects. Also, some local NGOs have already documented outcomes of this Project, and therefore, the study could not be considered to be at an early stage of investigating the impact of relocation.

Given the large number of relocation sites with varying distances from the resettlers' previous settlements, I chose to account for the location criterion through random sampling of resettlement sites. Since no comprehensive database was available that
included this factor for all families in the project, stratified sampling was not possible. Consequently, I randomly sampled the resettlement subprojects at various distances from the resettlers' previous settlement and at different distances from the CBDs.

The time constraints for the fieldwork was the primary limitation of this research, which restricted the number of sample households to 48 and the analysis to cover 3 resettlement sites, out of the more than 120,000 affected people in 12 different resettlement sites. The generalization of these findings may be problematic, if the context and process of resettlement of the selected resettlement communities is significantly different from other subprojects.

1.3.3. Data collection and fieldwork

For this research, the data was collected from two basic areas, each comprising multiple sources. The first area is the secondary sources on urban development and housing conditions of Mumbai. The second area is the fieldwork that was done in the summer of 2006, which mainly consisted of primary sources. This data was collected from face-to-face interviews with the displaced families, and involved the services of a local translator. The interview questions probed the key components mentioned previously, namely, the different household assets considered as interactive elements for the livelihood of the displaced households, and the resettlement and rehabilitation measures implemented under the project (Appendix 3). The interviews included both closed and open-ended questions, to acquire both quantitative and qualitative data.

Prior to conducting the formal interviews with 48 households, 6 pilot interviews were conducted to experiment with different types of questions and to simulate different
types of interview situations. This period was also used to appropriately enter the community without much dissonance to its people and to allow my translator to understand the intention of each question. Appointments were set for each household at the most convenient times for their members and an attempt was made to have both the husband and wife present at their interview. Since many interviewees were illiterate, oral informed consent was obtained, which required a full review by the ethical review board. I gave my introduction in Hindi to allow the interviewees to relax and the informed consent was taken with extra caution.

The language barriers present in communicating with the interviewees were limitations to the precise understanding of their views. The primary languages of the respondents were Marathi, Hindi, English, Tamil, Malayalam, Rajput, Gujarati, Rajastani, Kannada, Urdu, and Bengali, but interviews were conducted mostly in Hindi as the respondents had an adequate level in this language. The translator, who speaks English, Hindi, Marathi, and Tamil, was trained to ask the questions herself, to allow for a more fluent conversation with the interviewees. When an interviewee's reply was unclear, or when I felt that something could be further probed, as occasionally happened, I had the translator ask additional questions. Following the interview sessions, certain replies were interpreted, word for word, from the recorded tapes by the same translator.

1.3.4. Limitations of the study

A single period fieldwork was a constraint for a research which was intended to investigate the process of how resettlement affected the livelihoods of displaced households, which implies an analysis of change over time. Moreover, the difficulties and disputes occurring within the Resettlement and Rehabilitation under the MUTP seem to involve the
relocation of commercial structures and the associated compensations, as they comprised a large proportion of the requests for inspection sent to the Inspection Panel (The World Bank 2004b). Nevertheless, this should not invalidate the analyses on the types of changes to the livelihoods of displaced households due to resettlement or how the resettlement and rehabilitation measures could mitigate the adverse impacts and the recovery of their livelihood.

1.4. Structure of the Thesis

Besides the first chapter, which is the introduction to this research, this thesis consists of five chapters. In Chapter 2, the emergence of the MUTP is first analyzed for its relationships with urban development and change, the physical and spatial context, social demand, and the political interests in developing Mumbai as a 'world-class city'. The types of housing that are affected by the Project, housing conditions, and the relevant policies are also described.

In Chapter 3, the factors that influence the outcome of resettlement, that is, the changes in household assets, are first explored within the institutional structure and implementation processes. The chapter concludes with an introduction to the three displaced communities selected for this research.

Chapter 4 begins by showing how the changes in household assets correlate with and explain household preferences for current and previous settlements. Subsequently, the changes in household assets are further described and analyzed.
In Chapter 5, the main intention is to identify the reasons for certain households preferring their resettlement sites and for other households choosing to move out of their resettlement sites. The factors that explain why some households have already rented or sold their flats, and left their resettlement sites, are examined in detail. The analysis is also compared to the one presented by the Inspection Panel in the Investigation Report\textsuperscript{23} – a thorough evaluation of this resettlement project that was made as a result of a series of requests for inspection from the project-affected persons. The chapter concludes with a suggestion that applying only one part of the World Bank’s policy on involuntary resettlement could lead to inflexibility among local organizations in implementing a resettlement project.

\textsuperscript{23} After a series of requests for inspection by the affected persons under the MUTP, the Inspection Panel visited Mumbai in 2005 to establish whether or not the World Bank had complied with its own policies and procedures in designing and implementing the MUTP. The Investigation Report summarizes the findings from that investigation. A more detailed description of the process of investigation is mentioned in Chapter 3.
2. The Mumbai Urban Transport Project (MUTP), Resettlement and Rehabilitation

This chapter delineates the underlying factors in the emergence of the MUTP and the origin of measures and policies for the resettlement project under the MUTP. These descriptions are intended to contextualize the resettlement under the MUTP, within Mumbai's series of efforts to ameliorate its urban environment. In this set of initiatives, the MUTP was intended to improve living conditions, and can be conceptualized as the preliminary step to achieve Mumbai's goal by expanding the capacity of existing road and rail networks. The second half of this chapter elaborates on the underlying context as to why Resettlement and Rehabilitation became crucial in carrying out the MUTP.

2.1. Background of the MUTP

The emergence of the MUTP should be analyzed with an understanding of the complex and interwoven relationships between Mumbai's development and change, the physical and spatial context, social demand for better transportation, and political interests in developing Mumbai as a 'world-class city'.

2.1.1. Mumbai's development and physical context

Mumbai has a unique geographical form. Originally, it consisted of seven small islands, which were merged through land reclamations from the late-18th century to the early-19th century, to form the southern-most part of the peninsula of what is now Greater Mumbai. The city's physical development expanded from the southern tip of the peninsula due to the rise in the Chinese demand for opium, as well as the growing export trade in
cotton (Markovits 1995). Most of the prominent firms in opium trade managed successful conversions to the cotton trade or to the cotton-textile industry (Patel and Thorner 1995). After World War II, Mumbai became notable for the growth of capital-intensive manufacturing industries, light and medium engineering, including vehicle, vehicle parts, electric and electronic equipment, and petrochemicals. Mumbai also attained a high annual population growth (nearly 4% in the 1960's), that drew migrants from the rural areas who were searching for new economic opportunities. Later, in the 1980's, Mumbai's financial and business services expanded rapidly and began to replace the manufacturing sector.

Although the city's economy underwent certain structural changes, the CBD, which emerged and became consolidated during the colonial period, prevails as the destination for many residents. Hence, the principal cause of Mumbai's problems in housing and infrastructure has been identified as the phenomenal growth of economic activity and its concentration in the old, southern CBD. One of the earlier attempts to arrest further physical growth in the southern end of the peninsula was to concentrate investments in Navi Mumbai, located in the mainland, to thus form a 'dual city'. The MMRDA, a public agency in charge of coordinating development in the Mumbai Metropolitan Region, also made several attempts to restructure this pattern of development, beginning in the 1970's. For example, the industrial location policy was to discourage enterprises from setting up new businesses in the south (Mumbai Metropolitan Region Development Authority 1999).

2.1.2. Social demand and political motivations

The historical change in Mumbai, described previously, coupled with its unique

24 Research shows that the main contributor to the population increase of Mumbai, from the early 20th century to the 1980's, was migration rather than natural causes, and was mostly due to those coming from rural areas “in search for jobs” (Mukherji 1996; Muttagi 1987).
geographical form extending north-south, is often associated with high land prices, especially in the southern part of the peninsula. In fact, the high property values can be traced back to the 19th century, when the city's land prices were as high as those of London (Dossal 1995). Between 1966 and 1981, real land prices in Mumbai were reported to increase by 720% (Dowall 1992, p.18). Since the high-priced housing was out of reach for the majority of residents, the city's land use segregated dwellers between business districts (in the south) and residential areas (in the north). The lack of success in decentralizing commercial and business activities allowed the southern tip of the peninsula, where Mumbai's largest CBD is located, to accommodate nearly 55% of all the employment in Greater Mumbai, as identified in the 2001 Census (Mumbai Metropolitan Region Development Authority 1999).

Mumbai is endowed with a good physical infrastructure compared to the rest of India, but compared to its likely competitors abroad, it is considered to be poor (Patel and Thorner 1995, p.57). The Government of Maharashtra, after receiving a proposal from Bombay First, an organization of the city's corporate elite, constituted a task force for recommendations to transform Mumbai into a “world-class city” and to compete with other trade and financial centers in Asia (Bombay First and McKinsey and Company Inc. 2003; Government of Maharashtra 2004). Mumbai's makeover has been on top of election manifestos, with the central government's desire to make Mumbai a “Singapore” or a “Shanghai” (Times News Network October 12, 2004). In addition, another huge transport project – the Mumbai Urban Infrastructure Project – was prepared by the Democratic Front government and is underway, seemingly hastily prepared for the assembly election of 2004 (Bharucha 2003).

The objectives of the transport component in the proposal by Bombay First are to
increase CBD connectivity, lower the north-south congestion, and enhance the east-west connectivity. Some of the methods to achieve these objectives, along with creating alternative CBDs in the hinterland, are to: construct eastern and western freeways; develop a ring railway link connecting CBDs; create a trans-harbor link; and construct mass rapid transit systems. The MUTP, in this set of initiatives, can be conceptualized as the preliminary step to achieve Mumbai's goal by expanding the capacity of existing road and rail networks.

2.1.3. Emergence of the MUTP

From this background, the Country Assistance Strategy of the World Bank identified infrastructure bottlenecks as being major constraints to faster poverty reduction (The World Bank 2002a, p.3). In 1994, a study was conducted with the assistance of consultants from WS Atkins, and the MUTP was conceptualized. The project was aimed to improve both the rail and the non-rail infrastructure, to primarily encourage public transport. The rail component was intended to increase lines and clear hutsments, in addition to the three railway lines, which run north-south of Mumbai (Figure 2.1.). These railways are used by many Mumbai commuters to go to work in the southern CBD in the mornings, and to return home to the suburbs in the north in the evenings. The road component proposed widening two major roads, running east and west – the JVLR and the SCLR – which connect the western and eastern expressway, running north-south.
Figure 2.1. Map of Mumbai showing the MUTP components.


Note: Relocation of HHs in Transit housing at Turbhe Madale (836 HHs) is not included in the map due to unavailability of data.
The project was to be implemented as a joint venture between the Government of Maharashtra, the Indian Railways, and a few local bodies. The project was "designed as a first step to support urgently needed physical investment and to strengthen the institutional capacities required for sustainable transport development." (The World Bank 2002b, p.3). The Government of India is the borrower of the World Bank's loan and the MMRDA is the responsible agency for overall project coordination of road, rail, and Resettlement and Rehabilitation components.

2.2. Resettlement and Slum Rehabilitation Schemes

To understand why this Resettlement and Rehabilitation became such a crucial element in conducting the MUTP, the underlying context must be further examined. What is now the MUTP, began in 1995 as two, full-scale projects with one project for the transport infrastructure (MUTP) and the other project for resettlement, the Mumbai Urban Rehabilitation Project. Each project had distinct objectives, designs, and project preparation teams, owing to the magnitude of displacement involved in securing the right-of-way areas for the infrastructure (The Inspection Panel December 21, 2005, p.26-30). In this section, I briefly depict the types and conditions of houses that were affected by this project and delineate the relevant past and current policies.

2.2.1. Housing conditions in Mumbai

One type of housing affected by the MUTP called chawls were built on a large scale by the mill owners in the earlier days and accommodated their employees who worked in the
textile and related industries (Figure 2.2.). *Chawls* are like row-houses, that today contain one to several dozens of tenements in slum settlements, and that share facilities such as toilets, baths, and corridors for access. Usually, a committee operates such facilities, and fees are collected for this purpose. In some cases, after occupants become well know to one another, a high level of solidarity can develop, accompanying a rotary credit system. Until the early 1950's, *chawls* were the main mode of shelter for the urban poor and still serve the needs of those who cannot afford to buy a house in the formal market.

![Figure 2.2. Photograph of *chawls* in Mumbai.](image)

The type of housing in Mumbai, which is probably the most well-known 'housing issue' of the city is called *jhopadpatti* (translated as hutments or squatter settlements) (Figure 2.3.). *Jhopadpatti*, or hutments, in fact, did not emerge as a major problem until the 1950's and were inhabited by only about 5% of the city's population at that time (Singh 1980, p.8). By 1968, however, the population of those living in *jhopadpatti* equaled that of the *chawl* and constituted 18% of the city's population (Phatak 1996). The density of these settlements varies from 300 huts per acre (in parts of Dharavi or along the railway tracks) to
75 huts in isolated pockets (Sundaram 1989). Most huts are constructed with materials like untreated wooden planks, asbestos, or tin sheets, GI sheets, gunny cloth, polythene, or bamboo mats for walling and roofing. Also, most of the huts are not finished products at any time, and grow incrementally in both vertical and horizontal directions. The residents in these kinds of settlements are not necessarily workers in transit, or the lowest social order of the urban strata, and sometimes may be police constables, school teachers, or municipal officers.

![Figure 2.3. Photograph of jhopadpattis in Mumbai.](image)

2.2.2. Housing policies and the Slum Rehabilitation Scheme

One of the earliest housing policy initiatives introduced in the city by the state government was the Slum Clearance scheme of 1956, in which the government simply demolished slum settlements. Under this policy, however, not only was the demolition of existing slums a difficult undertaking, but the squatters simply moved within the city to previous or new slums, due to their social and employment networks (Government of Maharashtra 1997). The state government then introduced the Slum Improvement Program in 1971, which tolerated slum settlements and was intended to ameliorate their
environment by providing basic amenities. Yet, it did not go as far as to grant legal tenure security to the slum dwellers (Panwalkar 1996). Also, in 1976, a census of hutments was carried out and identity cards were issued to slum families. The relocation of slum dwellers was seen to be necessary when slums were removed for public purposes. Later, the Slum Upgrading Program that provided slum-dwellers with *de jure* tenure security through land titles was introduced to Mumbai in 1985 with support from the World Bank. This approach was a prevalent housing solution among scholars and international agencies following the "self-help" concept in which squatters are able to progressively construct and improve housing by themselves if they have security of tenure and access to credit, and where the role of government should be restricted to providing land and infrastructure services (Pugh 1997; Turner 1972, 1976, 1982). Nevertheless, this did not seem to attract the slum dwellers nor upgrade such settlements on a vast scale (Burra 2005; Mukhija 2002; Panwalkar 1996). The high densities in slums limited the opportunities for social amenities or for a consolidation of one's housing, and the slum dwellers had little expectations that the property values of their housing will increase as a result of regularization (Burra 2005; Mukhija 2003)

After the criticism against the slum clearance scheme and the unpopularity of the slum upgrading programs (Government of Maharashtra 1997; Mukhija 2002; Panwalkar 1996), the Slum Redevelopment Scheme was introduced in 1991 on the basis that the high property values of land on which squatters reside can be utilized to construct apartments on-site through cross-subsidization. Under this scheme, the cost of tenements for the slum dwellers was cross-subsidized by selling extra apartment units in the market. Due to the slow implementation of such slum redevelopment projects, however, the state government introduced the Slum Rehabilitation Scheme in 1995 to open up participation in managing
and implementing projects to the slum-dwellers, NGOs, and the private sector (Mukhija 2003, p.3). In addition to the cross-subsidization scheme allowing slum dwellers to have apartment units, free of cost, developers were given a series of prescribed densities for sites, out of which unused portions of the developable area could be transferred to anywhere north from the original site or sold to another user as a Transferable Development Right (TDR) (Government of Maharashtra 1997). Furthermore, regulatory limits on the developer’s profit were eliminated from the previous Slum Redevelopment Scheme to further increase the incentive to participate in the scheme. Since the Scheme was actively using market principles to facilitate and speed up the slum redevelopment process (Phatak 1996, p.192), it has often been criticized for its orientation towards the private developers (Das 2003).

The Resettlement and Rehabilitation Policy of the MUTP draws inclusively from the Slum Rehabilitation Scheme. This dates back to 1995 when the process for the Resettlement and Rehabilitation component established a Task Force to formulate the Resettlement and Rehabilitation Policy, which decided that the displaced households should get apartment units, free of cost, according to the Slum Rehabilitation Scheme. Therefore, in following the Slum Rehabilitation Scheme, every eligible household losing a residential structure is provided with an apartment unit of 225 sq. ft. at the resettlement site as well as have on-site amenities.25 Furthermore, as with the Slum Rehabilitation Scheme, TDRs are given to private real estate developers for acquiring land and constructing buildings, to offset the construction costs related to resettlement. Resettlement sites were acquired through three channels: purchasing through the TDRs a medium-rise complex already constructed by the Maharashtra Housing and Area Development Authority; obtaining land

25 Some of the standards set for the on-site amenities include: recreational space being 15% of the plot area, water supply of 135 liters per capita per day, one balwadi (kindergarten) of 225 sq. ft. for every 100 dwelling units, and a minimum width of pathway being 1.5 meters (Mumbai Metropolitan Region Development Authority 2002a).
through TDRs, on which the buildings are built by the implementing agency; and acquiring through TDRs both land and buildings constructed by the developers (Mumbai Metropolitan Region Development Authority 2002a). Furthermore, a cooperative housing society is formed for each building, where the land and building is owned by the cooperative and where members have occupancy rights to the apartments they occupy. In addition, 20,000Rs (US$452) per household is to be deposited in the bank by the Slum Rehabilitation Authority (SRA) with interest given to each cooperative housing society for maintaining its building. Since increases in tax payments often become obstacles for slum dwellers to shift into such apartments, tax concessions would be given for the first 20 years following the construction of tenements. These measures are considered as major progress, compared to past relocation projects, as the payments for past resettlement sites were usually unaffordable for slum dwellers, or for the government when rent was subsidized.

The MUTP, shaped by its process of development and housing conditions, was accompanied by the largest magnitude of displacement in the history of India. The Resettlement and Rehabilitation Policy, developed under the MUTP, is certainly a major milestone in Mumbai's housing policies, being the city's first urban resettlement policy entitling those affected by infrastructure projects to certain benefits. The project attempted to utilize accumulated knowledge of the city's *in-situ* slum rehabilitation by drawing various measures from the Slum Rehabilitation Scheme. The pertinent issue being whether or not the Resettlement and Rehabilitation Policy that adopted measures of *in-situ* slum rehabilitation was able to deal with the intricacies of relocation. This theme is central to this thesis.
3. Resettlement Processes and the Three Displaced Communities

This chapter deals with the institutional structure and resettlement process that shape the changes in the resettlers' household assets. The closest institution having a function that greatly affects the resettlers' lives is the cooperative housing society. Thus, an analysis of the cooperative housing societies is vital as they are in charge of operating and managing common facilities, collecting maintenance charges, and financially supporting families in crisis. The institutions responsible for the cooperative housing societies are the NGOs, contracted to support the MMRDA in implementing the resettlement. The analysis of these mechanisms is thus focused on whether or not the project (or the implementation agency) has enabled the NGOs to strengthen the cooperative housing societies. Furthermore, the analysis elaborates on whether or not the relevant policies for this resettlement have allowed sufficient flexibility in the operations of the NGOs and the MMRDA to effectively implement resettlement. In the second half of this chapter, I discuss the resettlement process of the three communities selected for this research, and describe how I entered the communities to illustrate some of the existing tensions.

3.1. Three Displaced Communities

Of the households identified as being affected by the project, 10,748 households were already resettled by June 2001 (6,716 in transit accommodation and 4,032 in permanent dwelling units) (Mumbai Metropolitan Region Development Authority 2002a). It was reported, however, that the number of houses and businesses affected by the project subsequently increased to about 23,000 (approximately 20,000 houses and 3,000 shops, representing approximately 120,000 people) in April 2004, due to changes in some of the
subprojects, for example, in increasing the width of proposed road alignments, and by the
detailed assessments that updated the preliminary numbers (The World Bank, p.5). In
addition, resettlement was not yet complete at the time of this research, due to delays in the
project schedule. Only 80% of the residential structures and 14% of the commercial
structures were shifted as of February 2006 (International Bank for Reconstruction and
Development and International Development Association February 27, 2006). Due to the
complex nature of this resettlement process, a conceptual visualization of all of the
relocation subprojects is extremely difficult. One community may be resettled to different
resettlement sites, while a resettlement site may be comprised of communities from
different slum settlements. Figure 2.1. shows the processes of resettlement that were
identified in 2004.

3.1.1. Selection of resettlement sites

The selection of relocation sites, one of the most pertinent tasks in any relocation
project, was constrained by the availability of affordable land in the vicinity of the core area
(International Bank for Reconstruction and Development and International Development
Association). The acquisition of land for resettlement sites under the MUTP relies on the
market-oriented use of TDRs (Chapter 2, Section 2), and since the mechanism for evaluating
the social and environmental impacts of the sites is weak and vague, the developer receiving
the TDRs may have been the only party to receive benefits. As questioned in the
Investigation Report, the use of fixed TDR rates for the project to acquire resettlement sites
motivated developers to purchase and develop cheap land, handing it over to the
implementation agency, and using the developable floor area where the land price is high,
thus raising severe social and economic concerns.26 (The Inspection Panel December 21,

26 For example, the property value at Mankhurd is about 1,500-2,000 Rs. (US$34-45) per sq.ft., but
the developer gets roughly 4.5 times the rights to development in other parts of the city where
Since the TDRs can only be used for plots lying to the north of the plot from which the TDR originates, developers are motivated to acquire and develop resettlement sites in peripheral areas and in cheap land in the south, so as to maximize their benefit. The development using the TDRs would be preferred for real estate that is highly active, for instance, in the central part of the peninsula. In fact, the acquisition of resettlement sites using TDRs for tenements on private land, amounting to roughly 12,000 apartment units, are all located in peripheral locations in the south, to limit resettlement sites near to the affected families in northern areas. Although the use of TDRs may be necessary to make a resettlement project financially viable, relying only on using TDRs may blind the implementation agency from the negative social and economic impacts on the resettlers. Hence, considerable guidance should be in place for the use of TDRs, to builders to develop resettlement sites that are close to the resettlers' original settlements and for incorporating the social dimension (e.g., distance to public schools and hospitals) when evaluating the suitability of potential resettlement sites.

3.1.2. Jogeshwari-Vikhroli Link Road in 2005

The JVLR is located roughly 20 km north from the city center and runs east-west.
(Figure 3.4.). It is considered as one of the most essential roads that links the Western Express Highway and the Eastern Express Highway, both of which carry residents from the suburbs to the city center. Although the land along the JVLR is not as densely occupied by residential and commercial structures as along the Santa-Cruz Chembur Link Road that runs east and west nearby the city center, many chawls and jhopadpattis (hutments) are situated in the area one after another along the road. Such settlements usually have names such as Durga Nagar for each one of them comprises several dozen to several hundred families. The types of occupations of the residents vary, with some residents working in private companies and government agencies and others managing small-scale, individual enterprises and shops selling cigarettes and coconuts. Many also work in garment factories and diamond-cutting factories located within walkable distances from their houses.

The JVLR subproject falls under the road component of the MUTP, which is intended to widen the road to decongest traffic and increase the east-west connectivity of the city. The initial Basic Socio-Economic Survey, begun in 1995, which identified the affected structures
that fell within the proposed road alignment, acquired a variety of household information, and took family photos for the Photo ID cards. The initial plan to increase the road alignment up to 30 m, however, was further increased to 45 m in 2004, which led the NGO to conduct additional surveys in the area.

Between the time of the Basic Socio-Economic Survey and the actual shifting of residents, a series of community-wide meetings were held to inform those residents who would be affected, of their entitlements under the project, and where the resettlement site would be constructed. Along with the meetings, the basis for the cooperative housing societies was formed, according to the settlements where the residents belonged, to allow for a smooth shift of resettlers into new buildings as a cooperative housing society.

The shifting and demolition initially began with areas that were within the 30 m road alignment, owing to its urgent construction schedule. Therefore, the NGO had to change the pattern of the cooperative housing society formation, allowing only those who were affected by the 30 m road alignment into the societies. The shifting began in September 2004, and the main bulk of the residents were resettled in 2005. At the time of this research, 858 families have been shifted to the resettlement site (June 2006). The allotment of new apartment units was basically determined using a lottery system, that took place with all the occupants of the buildings being present, to have transparency in the process of determining the occupants' floors. In some cases, however, a few households were shifted and allotted apartment units individually, to avoid the major flooding impact that took place in July 2005.

The JVLR resettlement site is comprised of roughly 1,000 families in 15 apartment
buildings, all of which are 8 stories high and includes a welfare office, a cooperative housing society office, and an elevator (Figures 2.1. and 3.5.). Most resettlers are from settlements from within 2 km of the JVLR site, and from chawl housing with a strong attachment to their former neighbors. The site is roughly 30 min away (by walking) from the nearest train station (Jogeshwari station), and residents usually take a bus or rickshaw to the station. The average monthly household income of those at JVLR at the time of this fieldwork was 6,686Rs. (US$151), which was the highest among the three resettlement sites (Appendix 4).

Figure 3.2. Photograph of JVLR resettlement site.

Entry into JVLR

Our entry to the community in JVLR was the first and perhaps easiest of the three

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29 The welfare office is usually used by the Mahila Mandal (women's group).
30 A rickshaw is a motorized tricycle with a roof, which runs at a cheaper rate than taxis.
resettlement sites, due to my previous experience in working with the NGO in charge of this resettlement project for two months in 2004. The director of the NGO suggested that I go to the JVLR site and work through the NGO's field staff in the office there. After asking the NGO staff members if they knew someone who might be appropriate for the pilot test interviews, my translator and I began our pilot test interviews with those who were in the Mahila Mandal (women's group) and involved with NGO activities. For each pilot test, one staff member from the NGO office introduced us to the interviewees to make the interviewees feel safe and comfortable. After a couple of pilot test interviews, we made interview appointments by ourselves without being accompanied by NGO staff, as the staff felt that we were becoming more familiar to the people there and that their introductions were unnecessary.

In the interviews, we encountered a problem when a man with whom we had set an appointment told a leader in his cooperative housing society that an 'investigator' had come from the World Bank or from the MMRDA to check up on the situation of the housing society. The leader may have said something to the man that caused him to become nervous and refuse the interview. After this incident, we became more cautious about giving our introduction so that potential interviewees would clearly understand the purpose of our research, who we were, how potential interviewees were chosen, how the data would be used, and that the people had the full right to refuse the interview.

3.1.3. Mankhurd site – From Harbor Rail Line to Mankhurd in 2000

The Harbor Rail Line runs from the city center to the north and stems in two directions, one extending to the western suburbs, and the other extending to Navi Mumbai on the mainland. The kind of jobs held by those who were once living along this railway were
varied, though most of the people were engaged in less permanent jobs and smaller-scale economic activities, such as selling usable garbage or vegetables on the streets, in contrast to the jobs held by those at JVLR. The religious backgrounds of the residents were also more diverse, with higher proportions of Muslims and Buddhists.

The resettlement process for the residents along the Harbor Rail Line differed from that of the residents along JVLR. Some residents recognized that the land on which they dwelled had belonged to the government long before this resettlement took place. Therefore, they had started to save money and formed the Mahila Milan (women’s group) since the mid-1980’s, with help from the local NGO involved in the resettlement under the MUTP. These activities were done in case of an emergency, when they might be required to shift somewhere else.

Although the residents along the Harbor Rail Line had been saving money for a possible relocation from dangerous areas along the railway, they encountered the demolition in 2000, prior to any notice or arrangement for temporary or permanent houses, during the funding negotiations with the World Bank. One resident illustrated the shock of the demolition in March 2000, while also expressing the happiness in having a permanent house:
This demolition that took place, it was the first time in India that on such a massive scale the demolition took place! [...] we thought, yes they will demolish, but they will bring bulldozer. And from where will it come in? It has to be brought from the road, [but] there is no place for it to come in. So then how will it get in? We thought on these lines since we had not seen such things happening before. But for the first time, we saw that the bulldozer goes over the railway tracks. We thought, well here is a *nala* (open gutter) so how can a bulldozer be brought? Yet, it was done. [...] But it was planned before, how it will be done, from where the bulldozer will be taken, how, from which route it will be taken. All was pre-planned. [...] Anyway what happened was for the good, we got this house, we got shifted here, and no one is going to remove us from here! Besides it was what we also wanted. Since 14 years the organization through which we are working, we too have been asking for it, right from the beginning. We have been telling the government, we are living in this country, and we have come here to earn our daily bread. In our native place, we are unable to earn sufficient to eat. We were starving. We worked, but when we worked in native place we did not get enough money to survive. So we need a place to stay. But we are middle-class people, we cannot purchase with the current rates. Even at the time when we came, we were not in a position to buy. So we have been telling the government only this: we too are citizens of this country; we too are its inhabitants. And at that time, we had asked for a place of 10 x 12 ft. area, and in that place, with our money, we will build our house, from where no one will remove us. But this [shift to Mankhurd], what happened, was good. The government also realized that in Bombay, there is shortage of space and the population is increasing. (Interviewee at Mankhurd, 2006)

Most of the people had suffered from having to make their own shelter arrangements after the demolition and prior to shifting to the resettlement sites in Mankhurd, since they had nowhere to go except for the area where the demolition had occurred.

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Our house was demolished without any notice for us. After the demolition, for 2-3 months, we stayed in the same place just with some temporary arrangement. Because we didn't have any other place to go to. 3 months later, we were given this house. Arranged [temporary shelter] with bamboo and plastic sheet. We couldn't have bath for 3-4 days. If the daughters wanted to change clothes, we go to some neighbors house, have a small watch, change clothes and go. For three months, our condition was very bad. So full with dirt. (Interviewee at Mankhurd, 2006)

In the Mankhurd resettlement site, 17 apartment buildings were present comprising about 1,800 families (Figure 2.1. and 3.6.). All of the buildings were 8 stories high and had elevators, welfare offices, and society office, though most of the elevators were not functioning due to financial constraints. The site is a 10-minute walk to the Mankhurd train station through a slum settlement. Most of the resettlers were from localities that were a few stations away, with average distances of about 2.5 km. The majority of the resettlers were from jhopadpattis, some of which had been recently acquired by the younger generations who were in their 20's and 30's. The average monthly household income was 1,814Rs. (US$40) at the time of the fieldwork (Appendix 4).

Figure 3.3. Photograph of the Mankhurd resettlement site.
Entry to Mankhurd

The interviews at Mankhurd began in late-July 2006 after the interviews at JVLR were completed. The Inspection Panel had come to Mumbai to investigate the project and had published the Investigation Report, revealing some 'shortcomings' of the resettlement project, which were partially attributed to the MMRDA and the NGOs that had been contracted to support the implementation (The Inspection Panel December 21, 2005). In my first meeting with representatives of the NGO, they seemed to be cautious about a researcher studying the resettlement. The staff members shared their discontent about the Inspection Panel's analysis that the NGOs did not have the capacity to implement the resettlement. After explaining my motives for this research to them, they were more sympathetic and suggested that I should introduce myself to the community at Mankhurd through a focus group with members from Mahila Milan (women's group), cooperative housing society leaders at the Mankhurd site, and staff members from the National Slum Dwellers Federation – a network of current and former slum dwellers who were in liaison with the NGO, and were, in practicality, in charge of implementing this project.

For the interviews at Mankhurd, the people felt less safe and secure about responding to our questions. Being accompanied by a staff member from Mahila Milan when setting appointments was of little help, as the respondents had basic concerns that they might be scolded after an interview by the cooperative society leaders or by someone who was their 'superior' for giving too much information to an outsider. In one case, a cooperative housing society leader confronted the family with whom we had set an appointment, asking: "Who are they?" "Why are they here?" Why were you giving information to those outsiders?" The incident convinced my translator and I to request formal letters of permission from the
leader of the federation of cooperative housing societies at Mankhurd, who is known to all residents in the site as their 'leader'. After following through with the idea, we showed the letter when setting up appointments, and the interviews were without incident.

3.1.4. Anik Runwal site – From railways to Wadala transit camp to Anik Runwal

The group that shifted from the transit camps in Wadala to Anik Runwal was comprised of resettlers who were from different localities along different railways in Mumbai. Most of the people were able to shift to the transit camps in Wadala before the demolition took place\(^{31}\) (Figure 2.1. and 3.7.).

![Figure 3.4. Photograph of Wadala transit camps.](image)

After a three- to four-year stay in the Wadala transit camps, the resettlers shifted to the permanent site in Anik Runwal in 2004:

\(^{31}\) The dates of demolition and shifting to the transit camps varied from the fall of 2000 to the spring of 2001.
Since many years, talks of demolitions were going on, so didn't pay much attention. We started paying attention only after the survey and the ID was made with the number of the house on it. I went to the native place during the demolition. When I came back, I found that the house has been broken down. But the neighbors had kept my household items safely. Then I went to [the NGO] and got keys for the transit camp and shifted. (Interviewee at Anik Runwal, 2006)

The stay at the Wadala transit camps was perceived in different ways among the resettlers. Some considered the shift to the transit camps as “progress” from jhopadpatti to a chawl system, while others found the transit camp environment to be awful. The general concern among those who experienced the transit camp life was the deteriorated hygiene due to the poorly maintained gutters. In fact, 2 of the 16 households interviewed shifted out of the transit camps due to poor health conditions. In addition, since the transit camps were distant from the previous settlements of many resettlers, 5 of the 16 households interviewed had one of their family members either change or quit their job during their stay in the transit camps.

The resettlement site at Anik Runwal and the adjacent Anik Rockline resettlement site accommodated roughly a total of 3,380 families in 33 buildings (Figure 2.1. and 3.8.). The 37 acres or 148,000 sq.m. plot is located 4·5 km away from the nearest train station (Chembur Station), and is connected by one bus route which comes every half hour. The apartments in Anik Runwal are six stories high without any elevators installed. Since the residents came from various localities, the distances from their previous settlements to the new site, ranged from 4·12 km. The average monthly household income was 1,559Rs. (US$35) at the time of this fieldwork, which was the lowest among the three resettlement sites (Appendix 4).
Entry to Anik Runwal

The procedure for the interviews held at Anik Runwal was also problematic. The NGO supervisor, who was on site, demanded that I give a list of all the households to be sampled and that I be accompanied by a Mahila Milan staff member who was working under him, to be introduced to the cooperative housing society leaders. Therefore, a crowd of a dozen people was usually in the hallway when we began to introduce ourselves. Some were curious bystanders, some wanted to know if we were from the MMRDA or the World Bank, some wanted to give information, some were telling us their family problems, and some were seeking a gift from us. Moreover, our proposal to the supervisor on site to write a letter of permission so that our procedure to set appointments would be simplified, was rejected.

The underlying reason for this refusal seemed to stem from a group of residents at the Anik Runwal site who were extremely upset and distressed about how the NGO had treated them during the resettlement process. According to the group of residents, the NGO’s promise to have them live in the transit camps for a maximum of 6-18 months had
been extended to 3-4 years. Furthermore, the group claimed that the NGO had promised to shift them to a resettlement site that would be closer to their original settlements, after a temporary stay in Anik Runwal:

There was a choice of going to Kanjurmarg [close to the original settlement] or Sion [Wadala] transit camp. We opted for Sion transit. Kanjurmarg transit camp was small and cramped. We were told that we could get a flat in Kanjurmarg where the transit camp is. We were told that whether we stay in Sion or Kanjurmarg transit camp, we will be allotted a [permanent] flat in Kanjurmarg when it is ready. So we thought we would somehow bear the troubles for 2-3 years [staying in Anik Runwal], in the hope that we will anyway get proper place in Kanjurmarg. From Sion transit camp to here, we were warned – if we did not shift to Anik Runwal as told, our water, light etc would be cut [at the transit camp]. (Interviewee at Anik Runwal, 2006)

The group of residents wrote a letter to the World Bank office in New Delhi but had no luck. They also showed us their letters of allotment for the Anik Runwal dwellings that were stamped to indicate “transit,” as documents proving that the NGOs had promised the Anik Runwal site to be for a temporary stay. My translator and I were asked to help the group acquire dwellings near their previous settlements, for example, by writing a letter to the World Bank. I did not think that I, let alone my translator, was in the right position to write such a letter, and was also unsure about the extent to which the group's explanations were true, nor about how the NGO and the MMRDA were proceeding with the matter. Therefore, I only gave to the group the address of the Inspection Panel and, as an example, a hard-copy of one of the requests for inspection that had been sent to the Panel by another resident association.

The effort to prevent affected persons from becoming impoverished, through the city's first resettlement policy, appeared to have been hampered somewhat by the improper
resettlement processes that had taken place. Thus, it appeared that the history of the resettlement of these communities and the resident's struggles and issues were affecting our entry to the communities. My intention to be an 'objective' researcher from the outside and to take a neutral stance, became more of a fantasy, with different actors wanting us to take their particular stances. Thus, despite the seeming contradiction, for a researcher to be 'objective,' a strong awareness is required of one's 'subjectivity' about the various issues.

In the next chapter, I explore the detailed content of each resettlement site and their issues.

3.2. Implementation Process of Resettlement

3.2.1. Institutional set-up of Resettlement and Rehabilitation

The main implementing agency of the MUTP is the MMRDA; however, as the Inspection Panel observed, a huge part of the Resettlement and Rehabilitation tasks was delegated to the NGOs (The Inspection Panel December 21, 2005, p.58-61). Therefore, most of the tasks in the area of implementation support for resettlement and rehabilitation were conducted by the NGOs. Examples of support included allotment of dwelling units to individual households, public announcements for the proposed resettlement, registering cooperative housing societies, and training the community to manage the cooperative society's affairs (Mumbai Metropolitan Region Development Authority 2002a) (Figure 3.1.). Hence, the Inspection Panel ascribed many of the 'deficits' in public consultation, that were claimed by the group of displaced households when they requested inspection, to the work of the NGOs (The Inspection Panel December 21, 2005, p.89-92; The World Bank 2004b).
Figure 3.6. Conceptual diagram of intended institutional structure between households, cooperative housing societies, and NGOs.

During the period of identifying the affected households and issuing identity cards, the foundations for the cooperative housing societies were formed by the NGOs. Cooperative housing societies provide support through community revolving funds and through emergency funds for families with funerals. A cooperative housing society is a common form of tenure in Mumbai's apartment buildings and is widely understood, compared to other cities in India (Sukumar 2001). Not only are cooperative housing societies intended to maintain the physical aspects of the buildings, but they are obligated to assist households both socially and financially (Figure 3.1.). The households within societies are to select 10 representatives for its formation and one person as the chief promoter of the society. The selected members are asked to elect candidates among themselves for the posts of Secretary

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32 The cooperatives in the state of Maharashtra are governed by the Maharashtra Co-operative Societies Act 1960 and supported by the Maharashtra Co-operative Societies Rules, 1961.
Chairman and Treasurer and two more representatives, of which one is a woman representative, are elected to a managing committee. Members of the cooperative housing society have voting rights for electing the managing committee and have the right to inspect the accounting books of the society and obtain copies. Each society is expected to have its own guiding principles for the cooperative, which are approved through a resolution of the society. After necessary documents are provided to the SRA, the SRA provides certification for the opening of a bank account in the society's name.

Two project organizations function as safeguard mechanisms (Figure 3.2.). One is the Grievance Redress Mechanism that provides individuals and groups with the means to address legitimate concerns/problems of those who consider themselves to be deprived of appropriate compensation, resettlement or rehabilitation benefits, as available under the Resettlement and Rehabilitation Policy. The second organization is the Inspection Panel, which serves as an independent mechanism for ensuring accountability in Bank operations for its policies and procedures. Subject to Board approval, the three-member Panel is empowered to investigate problems that are alleged to be the result of the Bank's failure to comply with its own operating policies and procedures.
Members of the Inspection Panel are selected "on the basis of their ability to deal thoroughly and fairly with the requests brought to them, their integrity and independence from the Bank Management [the staff involved in the design, appraisal, planning, and implementation of the project], and their exposure to developmental issues and living conditions in developing countries." (The Inspection Panel 2006, p.90). Any individuals or groups of individuals who believe that they, or their interests, may be harmed by a Bank-supported Project can request the Panel to investigate their complaints. The Panel will register the claim and then send a copy to the Bank Management. After evaluating the
Management's response to the alleged violation of the Bank's policies, the Panel will assess the eligibility of the original request before making a recommendation to the Board of Executive Directors about whether or not the claim should be investigated. If the Executive Directors agree to approve an investigation, the Chairperson of the Panel will designate one or more Panel members to conduct the investigation and prepare a report on their findings. After the Panel submits its report on the investigation, Bank Management must submit its recommendations to the Executive Directors in response to the Panel's findings. The Executive Directors then decide what action should be taken in response to the claim.

During the process of resettlement under the MUTP, four requests for inspection have been submitted to the Inspection Panel by six local associations in Mumbai, claiming on behalf of the displaced households that some of the requirements under the World Bank's involuntary safeguard policy OD 4.30 have not been followed, which will likely cause an adverse impact on the outcome of this resettlement. One of these associations claimed that:

our rights to participation and consultation were effectively denied and that our attempts to raise our concerns were not successful. In particular, we claim that the failure to provide income restoration would result in significant harm. This failure would destroy our livelihoods, causing us to dismantle our productive sources and cause our supporting networks and kin groups to disperse (The World Bank 2004b, p.2).

The Panel visited Mumbai in February 2005 to carry out the investigation and conducted an additional visit in May 2005. The purpose of the investigation was to establish whether or not the Bank has complied with its own policies and procedures in the design and implementation of the MUTP. The findings in the Investigation Report, which claimed that the Bank is not meeting its involuntary resettlement policy, prompted the Bank to stop
the funds to the road component and the resettlement component of the MUTP in March 2006. The MMRDA seemed to be reluctant to resume the loan, by complying with the World Bank’s ‘stringent’ policy, yet the suspension was lifted in July 2006 during the fieldwork of this research33 (Times News Network 2006).

3.2.2. Management of housing through cooperative housing societies

The government has made some arrangement for us to be capable of taking care of our children’s future. We’ve got this house which is our property. We are not people who are capable of acquiring property, because we don’t have that kind of earnings. With this house, my children may be able to establish themselves in life better than with what we could have provided them. (Interviewee at Anik Runwal, 2006)

Two tiles have come from the wall. Talked to [the NGO] about this problem but were told that this is now your property so you have to take care of it. So I leave as it is. Let the tiles fall down. (Interviewee at JVLR, 2006)

The statements above reveal the difference in people’s attitude about this resettlement and about their new environment. The comments also suggest that a huge social factor is shaping the people’s motive for taking care of their surroundings. In fact, the cooperation and responsibilities of all members in the cooperative housing societies are imperative for maintaining the new apartments, which can be considered as common property of the members. Therefore, the analysis of the cooperative housing societies is essential for understanding the implementation of this resettlement project and the potential for improving the resettlers’ housing, social assets, and financial situations (Figure 33)

To lift the suspension, the Bank requested the MMRDA to take a number of steps: to improve databases; make progress in negotiating with affected shopkeepers and have broader options available; to improve the services to the resettlement sites for adequate water supply, better transport connectivity, and a funded maintenance infrastructure; to effectively use the grievance redressal mechanism; and to strengthen the implementation capacity.
First of all, one of the difficulties in financially managing and maintaining the buildings in the resettlement sites is that, in general, the occupants are poorer than the residents in localities where the resettlers previously lived, as well as the participants in the Slum Rehabilitation Scheme that served as the model for the Resettlement and Rehabilitation program. The buildings under the Slum Rehabilitation Scheme (Chapter 2, Section 2) are comprised of people from different income strata, as the Scheme prescribes a ratio of apartment units for each site to be provided to slum dwellers free of charge to units sold at market rates (Government of Maharashtra 1997). With a cooperative housing society comprised mostly of dwellers with insufficient income to purchase apartments, the probability is high that the maintenance of the resettlement sites will deteriorate.

Another constraint in managing the resettlement sites is derived from the lack of experience on the part of occupants in managing their housing through a cooperative society. Most importantly, differences exist in the attitudes between committee members and occupants. For example, one cooperative housing society leader expressed his difficulties in collecting the maintenance charges:

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34 The prescribed ratio between the rehabilitation component (apartments given freely to slum dwellers) and the sale component (apartments sold in the market) is 1:1 in the suburbs, 1:0.75 in the city, and 1:1.33 in “difficult areas” such as Dharavi.
...Once I had a talk with society's members about cable connection. The cable guy suddenly raised the rates. ...Now there is a man who has not paid maintenance charges to the tune of 6000Rs. [US$136], and that man said, even if the cable fellow takes 600Rs. [US$14], instead of [the current rate of] 200Rs. [US$5], he is willing to pay it. Today we have maintenance of 300Rs. [US$7]. And 75% of the people are not willing to pay it. In their previous place they paid nothing, electricity was on rent basis. There was no water charge or anything else. And they got habituated to that. I tried to make them understand a lot regarding maintenance. You only will have to pay, so then why are you letting the amount keep increasing? ...It has become a sort of policy of some of the people. ...[They will say] 'the society waits for the payment of the 6000Rs. [for the maintenance charge debt], in the meanwhile I continue to get my interest on that amount [by depositing it in a bank], and society continues to provide me with the facilities without my paying. Water is available, light is available, passage light is there.' ...Our thinking is: we are taking you to a better place, you stay here, you have to think of the future of your family, and that's the intention with which this accommodation has been given to us. (Secretary of a cooperative housing society, 2006)

On the other hand, occupants have their own views about the members of the cooperative housing society committee:
...we need [the] Society, but we need good people to run it. The previous people have eaten all the money and gone away. No one shows anything, no one tells anything, they don't take any meeting, all we are told is 'give money, give money'. ...The rooms outside the building are being given on rent, balwadi [kindergarten] is being given on rent, and all this rent that is received, where does it go? No one knows. Those who are educated have managed to get into the running of society. And when anyone else questions, they reply, 'here then, you run the society.' Thus they escape accounting for the money. And these people who are not even running the society properly they are getting all the facilities: house, vehicles, jobs etc. See, there is no one to question [their actions]. We've come to know that 20,000Rs. [US$452] per family has come to society from the government. What interest is received on that amount is unknown. Only instruction to us is - pay the money, pay the money. Other buildings pay 300Rs.[7US$], 250Rs. [US$6] [for maintenance charges]. In this building it has never come down from 400Rs. [US$9]. ...Everyone has got fed up [with the] Society and the way it is run. (Interviewee at Mankhurd, 2006)

The lack of understanding by the cooperative society leaders about managing the funds and coordinating the occupants to maintain the buildings, on one hand, and the lack of understanding by the occupants about the rules and norms of operating a cooperative housing society, on the other hand, are important sources of the shortcomings in housing maintenance. In fact, some of the defects in water supply, which include contaminated water tanks, are partially due to the misbehavior of the residents. Residents are commonly seen urinating in common space, and in fact, a cooperative society leader, who was showing me a water tank that was contaminated with sewage, was, at the same time, urinating near the water tank! In general, the consciousness of the chief promoters for the cooperative housing societies, let alone the occupants, does not extend beyond their own buildings, and the maintenance of common space and facilities, such as the cleaning of pathways and playgrounds, is not coordinated among the various cooperative housing societies. This issue is especially pertinent, as studies on urban relocation show that the performance of community leaders has a strong effect on the development outcome in the first few years.
after resettlement (Viratkapan and Perera 2006).

A further negative ramification of the attitudes of the involved parties is that the lack of experience in managing a society has reduced the effectiveness in disbursing the community revolving funds of 1,000Rs. (US$23)/household.\textsuperscript{35} This is a crucial component in offsetting the burdens for the resettlers’ transition, while they attempt to re-establish their livelihood. One cooperative housing society leader described his struggles in trying to operate the community revolving fund:

...what we have done is, we deposited [the money given for the community revolving fund] into the bank. Now what is this scheme of Revolving Fund, rules pertaining to it? We don't know them, have no idea regarding it. ...When we come to know how to run the revolving fund, then we will do it. During meetings, I sort of came to know that this is for using when there is some financial problem, someone needs money. You give money and charge some interest, which increases fund amount as well. But then, how to give money to someone who is, in any case, not paying any dues? How do we recover it!? So we have the money in the bank for now and getting bank interest on it. Now circumstances are such that we give someone money because he has need for it. ...People started asking for the money, saying it is our money, give it to us. I refused on the grounds that this amount is in the name of the society as revolving fund. Nothing has come in individual name. ...Yes we did think of [giving loan to those who are regularly giving maintenance charges]. But then again there will be fights. [People will say] 'The money is mine. He needs money, you give him. But in that amount my money is also present. So if you can give him my money, why don't you give it to me as well? Why this partiality? If he has the right, I too have right to get it.' (Secretary of a cooperative housing society, 2006)

\textsuperscript{35} Although the initial Resettlement Action Plan indicated two separate types of monetary support for resettlers, i.e., compensation for increased travel expense and a community revolving fund (Mumbai Metropolitan Region Development Authority 2002a), a one-time monetary compensation of 1000Rs./household was disbursed to each cooperative housing society for compensating increased travel expenses. Therefore, the initial policy to distribute up to 12 quarterly season tickets for excessive distances as compensation for increased travel expense was not implemented.
The factors contributing to the success in maintaining the building infrastructure, and running the cooperative housing societies, seem to spring from how well the occupants know each other, i.e., whether or not the people are from the same area, as well as the level of education of the members. Occupants and members of the society committee explained that good collection rates for the maintenance charges depend on whether or not "the same people who were staying in the previous place ...have come over here." In short, familiarity among the people is important.

The analysis in this section suggests that if the occupants' understanding and capacity to function as a housing society was improved, some of the negative impacts on household assets could be avoided. Since the occupants are coming from slum settlements and entering a cooperative housing society system, their knowledge about the society committee's responsibility, and how the occupants are supposed to cooperate is absent. Therefore, the role of the NGOs, whose involvement was to support the displaced households in their adjusting to new circumstances, must be carefully scrutinized.

3.2.3. NGO involvement

My experience in talking with the field officers of the NGOs as well as the analysis done by the Inspection Panel suggests that a huge part of the Resettlement and Rehabilitation was delegated from the MMRDA to the NGOs (The Inspection Panel December 21, 2005, p.58-61). The field staff of the NGO on the JVLR site claimed that many of the tasks involved in registering the cooperative housing societies had been delegated from the MMRDA. The registration of cooperative housing societies, in fact, was not completed for all occupied buildings, even after one and a half years of resettlement, in the

36 Sources were from the interviews with the households and from the focus groups involving the cooperative housing society leaders.
case of JVLR, and after roughly two years in the case of Anik Runwal. This delay in the registration process of cooperative housing societies appears to be the starting point for a vicious cycle, as the funds from the government to maintain the buildings and the communities' revolving funds are not available until the societies are legally registered. Due to the occupants' lack of tenure security, people are hesitant about paying the maintenance charges to the society, which creates more difficulties for properly running the society. This difficulty seems to be causing distrustful relationships between the residents, society committee members, and the NGOs.

Another observation made about the JVLR resettlement site was that the cooperative housing societies and the Mahila Mandal (women's group) were reliant on the NGO staff. The cooperative housing society leaders tended to attribute many of the deficits in the resettlement site, such as the overflow of septic tanks, to the NGO, and the NGO had difficulties in clarifying the responsibilities of the cooperative housing societies. Furthermore, even though the NGO held a series of public meetings for residents to discuss the resettlement site design, and to offer suggestions, many of them had negative attitudes towards the NGO, believing that their suggestions and requests for the resettlement site design were not being honored.

As for the relationship between the cooperative housing societies and the NGO in Mankhurd, the long-standing support of the NGO, for the residents, since the mid-1980's had created a more trusting relationship. Members of the Mahila Milan and the leaders of the cooperative housing societies were more supported by the NGO, and more independent

\[37\] A fund called the Community Development Fund will be deposited by the SRA in a bank after the completion of registration of the cooperative housing societies. This amounts to 20,000Rs. (US$452)/household. Therefore, with a 6% annual interest rate, for instance, each household is theoretically entitled to 100Rs. (US$2.6)/month for their maintenance charges.
and confident about their accomplishments at this resettlement. Although the Mahila Milan in Mankhurd were not engaged in any income-generating activities, the women's saving group, which was begun prior to the resettlement, was appreciated by the residents. People in Makhurd had few complaints about the housing design, as the dwellings that were purchased by the MMRDA for this project had already been built by the Maharashtra Housing and Area Development Authority, and no room was available for participation in the resettlement site design.

In Anik Runwal, the residents' distrust of the NGO stemmed from the exaggerated 'promises' that were made during the course of resettlement. A group of residents claimed that the NGO had promised them that their stay in the transit camps would only be 6-18 months at most, and that they would be given a permanent resettlement site close to their original settlements, neither of which was realized. The NGO may have been trying to incrementally establish its partnership with the community, but the broken promises have been a major obstacle to gaining the residents' cooperation and trust.

The issues in managing community assets and the effectiveness of intermediary institutions (such as the NGOs) have been widely discussed in the literature (Hardin 1992; Lee 1998; Olson 1973). Such arguments usually prompt public consultation and community participation in the decision-making and planning, in the earlier phases of development projects, for example, in some World Bank policies (The World Bank 1999, 2001b). The advantages of early consultation (for both the policy-makers and the 'beneficiaries') can be summarized in two points. First of all, an early involvement by the communities can enhance the 'sense of ownership' by the 'beneficiaries,' leading to the sustainability of a project's outcome. Second, early involvement can reduce the gap between the 'needs
assumed by the policy-makers' and the 'actual needs of the beneficiaries'. If these ideas are true and can be realized, then early involvement of communities can benefit both the policy-makers (by coming up with an appropriate project) and the beneficiaries (by reflecting their needs and preferences on the project design).

The responses from the interviewees, however, suggest that a positive outcome because of early participation did not come about as expected. The Investigation Report and the World Bank's Involuntary Resettlement Policy seemed to assume a priori that early community participation would enhance the sense of ownership, but the resettlement site offered, at least in the case of JVLR, severe limitations for possible design choices and other opportunities for decision-making. In such cases, the participants may have felt betrayed to have been consulted, or at least dissatisfied with the outcome even though they were able to express their opinions. For instance, the discussion about possible placement of a partition wall in the apartment units was the main topic in the building design for JVLR. Since no consensus was reached about the partition in the meetings, which were described as being like a "fish market" by some participants because they were too loud and chaotic, the decision was to remove the partitions from the floor plans and allowing occupants to build them for themselves.\(^{38}\) Thus, even though the resettlers had opportunities to express their opinions on the apartment design, in the end, some of their preferences were not realized, which was annoying to those involved.

Furthermore, some officers at the MMRDA may have assumed that the mere setting up of a cooperative housing society would automatically prepare the resettlers to participate cooperatively in maintaining the apartments. Nevertheless, as with other projects involving

\(^{38}\) Many of the occupants at JVLR actually built partitions for themselves after resettlement.
the establishment of community-based organizations (Abraham and Platteau 2004; Agarwal 2001), the cooperative housing societies may have institutionalized the power dynamics to create opportunities for leaders to take advantage of their positions. This idea is supported by research studies of the Mumbai slums, where community organizations in the slums were said to have substantial roles in enhancing the participation and power of the local elite in decision-making, and providing them with more access to local productive resources, while excluding the poor from these areas (Desai 1995; Panwalkar 1996). According to Cleaver (Cleaver 1999), such institutionalization of power dynamics is due to neglecting the wider structural factors that was shaping such conditions and relations, in this case, the literacy and educational 'divide' among the members in the cooperative societies.

The lack of participation and action from the cooperative housing societies to resolve issues at the resettlement sites, especially at JVLR, appear to be derived from several factors\(^{39}\) (Table 3.1.).

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\(^{39}\) The idea of having a focus group with the cooperative housing society leaders at JVLR arose from the leaders' group, after they and I discussed the problems at the site. Of the 15 housing societies, 6 representatives attended the focus group discussion.
Table 3.1. Explanations for the problems and coping strategies at the cooperative housing societies.

<table>
<thead>
<tr>
<th>Internal factors</th>
<th>External factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>• “People make excuse to avoid paying their maintenance fees”</td>
<td>• “Asking local politician to plant trees and clean the gutters and septic tanks”</td>
</tr>
<tr>
<td>• “People are from different areas and background so hard to coordinate”</td>
<td>• “Bad construction of the complex by MMRDA”</td>
</tr>
<tr>
<td>• “Slum dwellers don’t have the mentality to keep clean”</td>
<td>• “Asking me to write a formal letter to the municipal corporation and MMRDA to solve the issues at the site”</td>
</tr>
<tr>
<td>• “There is difference in mentality between rich and poor families regarding paying maintenance fees”</td>
<td>• “Delay in society registration”</td>
</tr>
</tbody>
</table>

Source: Focus group with the cooperative housing society leaders at JVLR

In addition to the explanations given above, my observations at JVLR suggest that the resettlers' efforts were attempts to find the 'right' person in the 'right' position (supposedly with power), rather than to utilize their time, labor, and knowledge, at the best cost to improve their environment. This tendency may be rooted in the political culture of many slums in Mumbai, where, according to Pendse, “the local power structure maintains itself by manipulating its patrons and coercing the local community” (Pendse 1991, p.308). Moreover, such patron-client relationships are discouraging the community participation by offering 'cheaper' ways to access resources and information (Desai 1995). Some may argue that such patronage and capturing of benefits by the local leaders are benevolent forms of elite domination, that allow for improved maintenance and access to resources for the community. Nevertheless, the situation of the cooperative housing societies in this resettlement project, differs from that of the slums, since a huge amount of money and opportunities for seeking personal benefits (by renting the society offices in the apartments, for instance) is available, and payments to the leaders (as determined by them) are compulsory. Both of these aspects can oppress the livelihood of the member families.
Therefore, if the resettlers' housing, common properties, and societies are to be sustained, any conflicts must be resolved between members of the societies and a consensus must be obtained for the basic rules. Project sustainability, through such processes, and as observed in many other community-based projects, not only requires member participation, but also institutional support from external agencies for the inputs and training (Mansuri and Rao 2004). The task of the NGOs should be to identify, categorize, and clarify all agreements concerning the responsibilities of society members, leaders, and NGOs that are in charge, to facilitate each of the actors to fulfill their duties. With this aim in mind, the NGOs should not make unrealistic promises, or fail to keep their promises with the resettlers.

To assist with the NGO's efforts, the implementation agency should not have devolved some of its tasks to the NGOs. In fact, the NGOs were not able to cope with some of the tasks that were entrusted to them, since they do not have the same level of authority as that of the implementation agency. For instance, one of the NGOs was not able to persuade a family to stop breaking the load-bearing walls to merge two apartment units into one. Eventually, after a series of oral and written cautions to cease their activity, the NGO wrote a letter to the MMRDA to have staff stop the family. Successful outcomes may require 'tough-minded' authoritarian measures to address the misbehavior of residents (Werlin 1999), which may be ineffective, when conducted by the NGOs.

3.2.4. Influence of other project components on resettlement

One of the most critical factors that affected the outcome of the JVLR resettlement

\[\text{\footnotesize{40 In fact, a similar issue was observed in the Slum Upgrading Program in Mumbai in the 1980's. In the Program, the cooperative housing society was responsible for dealing with encroachments. According to Panwalkar, however, \textit{not all society committees have yet reached the organizational level of strength to tackle them without the support of official power structures} (Panwalkar 1996, p.134).}}\]
project is the frequent changes in the road alignment. The road alignment for this road-widening subproject changed from the initial 30 m width, during the Basic Socio-Economic Survey, to a 35 m width in 2000, and then to a 45 m width in 2002. Furthermore, the road alignment was shifted sideways after it was widened to 45 m in 2004. The primary effect was an obvious overload in the work by the NGO to reiterate the process of counting and numbering affected structures, and in distributing new ID cards, with little additional financial assistance from the MMRDA.

In addition, the implementation agency demanded the NGO to establish cooperative housing societies, beginning from those closest to the road, to those furthest from the road, instead of organizing the societies on a village-wise basis, which tended to break-up the existing community structure, even more than would a simple resettling (Figure 3.3.). As a result, the cooperative housing societies had to be organized with members from other nagar (villages), which might have affected their long-term income restoration, since the resettlers' housing maintenance and resilience for recovering from job losses depends on the functioning of the cooperative housing societies and level of social ties carried forward from previous settlements. Despite the initial intention of the project to contract NGOs for consultations with the affected families, the project's lack of attention to procedure ruined the NGO's endeavor to resettle families in groups of known neighbors. Thus, this thesis recommends community-wide resettlements to be performed that preserve existing social networks. Other relocation studies also show that the unity of community members leads to

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41 From the interviews, most respondents expressed attachment to those from the same village and unfamiliarity with people from other villages. Therefore, the resettlers' social networks appears to be dense within their villages but its extension outside their villages is limited.

42 Although Policy 2001 OP 4.12 clarified that "patterns of community organization appropriate to the new circumstances are based on choices made by the displaced persons" (The World Bank 2001b), the Resettlement and Rehabilitation Policy that adopted 1990 OD 4.30 did not include a similar statement.
a better development outcome in the long-term after resettlement (Viratkapan and Perera 2006).

Figure 3.8. Diagram showing change in formation of cooperative housing societies
4. Families Staying: Impacts on Household Assets

The stories from 48 families in the 3 resettlement sites depicts how their household assets, intended to show the impact of resettlement, were adapted in various ways, and shaped by different facets of the resettlement implementation. In many ways, the scale of the resettlement site and its proximity to the resettlers' original settlements, determined the impact on the displaced families. While the Mankhurd and JVLR resettlement sites were relatively close to the resettlers' previous settlements (generally within 4 km), Anik Runwal was 4-12 km (average = 8 km) away from the resettlers' original settlements. The effect of the poor accessibility not only led to inflated commuting times and travel expenses, but also to losses and changes of jobs. Furthermore, compared to Mankhurd and JVLR, that each comprised roughly 2,000 and 1,000 dwellings respectively, the Anik Runwal resettlement site, together with the Anik Rockline site, accommodated over 3,000 families. This scale became an obstacle for integrating the poor families into the broader social and economic fabric of the city. This chapter explores in more detail, the effects of resettlement on the displaced households.

4.1. Household Assets Defined

One of the main intentions of this research is to examine the changes in household assets caused by this relocation project. As mentioned in the Introduction, direct impacts of relocation are considered to be on housing, access to jobs and services, and social assets.

Housing, as an asset, was analyzed through various questions in the interviews.
These questions determined whether or not housing conditions improved or worsened, compared to the interviewee's housing before resettlement, in the area of floor area, open drainage, greenery, open space, impact from flooding, solid waste, opportunities for domestic income-generating activities, water supply, toilet, electricity, fear of eviction, protection against weather, privacy, and noise (Appendix 5). The respondents commented about the importance of these indicators through open-ended questions.

Accessibility to jobs was analyzed by asking about the commuting time of each earning household member. Information on mode of travel for commuting was also acquired to probe into any changes in travel expense. As for the accessibility to services, the interview questions sought to determine whether or not the time needed to reach various facilities increased or decreased due to resettlement. The facilities included: school, childcare, ration card shop, grocery shop, religious facility, and train station.

Social assets were examined basically through two elements described in the Introduction: social network, and level of cooperation among neighbors. The questions that were asked to probe the size of a respondent's social network dealt with the number of people who are known by a respondent in the neighborhood and whether the number of people in the neighborhood who help the respondent have increased or decreased. Information about the level of cooperation was obtained by simply asking the interviewee how the level of cooperation has changed.

These direct impacts on household assets can spread to affect other assets, such as

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43 The open-ended question that was asked for this purpose was: "Out of the points of housing conditions just mentioned, which issue do you feel is the most important?" (Appendix 3) For this question, the points that were mentioned by one or more interviewees were included in the analysis.
income and health. With regard to income, information on both individual monthly earnings as well as how the total household income has changed was acquired. Questions about health explored the frequency of sickness, absenteeism from school and jobs.

Questions were also asked about each component of the household assets to acquire more descriptive information, which was woven into the following analyses to help visualize the context of the relevant issues.

All replies by interviewees about the various household assets mentioned above were coded as “1” for “increased” or “improved,” “0” for “no change,” and “-1” for “decreased” or “worsened.” The indicators that show the averages for multiple households can therefore be regarded as being on a scale from “-1” (asset worsened) to “1” (asset improved). By calculating the average changes in household assets, many households were found to have generally decreased household assets after resettlement, with the aggregate value of housing, accessibility, and social assets being -0.36. The findings also show that the housing conditions of the resettlers have generally increased (0.35), while access to jobs, access to services, and social assets have generally decreased through resettlement (-0.75, -0.59 and -0.39, respectively) (Figure 4.1).

44 Responses from interviewees that were not applicable were excluded from the calculation.

45 Using average values for “improved,” “no change,” and “worsened,” actually hides the variances among these three types of responses. For example, the equal but opposite numbers of “1” (improved) and “-1” (worsened) responses would negate each other and be equivalent to all respondents answering “0” (no change). In such a case, the problem areas mentioned by those who replied “worsened” could be ignored in the research. To overcome this weakness, I have included descriptive information from the results of the open-ended questions.
The resettlers' preferences for either their current or previous houses can be explained by the changes in household assets. Those who preferred their current residences generally increased their household assets, while those who preferred their previous housing did not (Figure 4.2.). The families who preferred their previous places had an aggregate average change of housing, accessibility, and social assets of -0.30, while those who preferred their current place had an aggregate average of 0.12.
Figure 4.2. Housing preferences and average changes in housing, accessibility, and social assets.

In fact, the statistical analysis shows that the changes in housing, access to jobs, access to services, and social assets is strongly associated with the resettlers' housing preferences. This empirical finding indicate that the displaced households' preferences for either their current residence in the resettlement site or for their previous housing in the slum settlements can be explained, to some extent, by changes in the housing, accessibility, and social assets, as hypothesized in the Introduction to this thesis. It also suggests that an avoidance of the adverse impacts on these household assets will lead to a better acceptance of the new resettlement sites. Hence, a deeper examination of the reasons for changes to

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46 A binary logistic regression was used for this analysis. Logistic regression is a statistical technique suited for analyzing discontinuous or discrete dependent variables. The dependent variable for this logistic regression is the resettler's housing preferences and the independent variables are the changes in housing, access to jobs, access to services, and social asset. The Nagelkerke's R-Square, which indicates the strength of association between independent and dependent variables, ranging from 0 to 1, was .701 for the variables mentioned above (Appendix 6).
these household assets, caused by resettlement, would be warranted.

4.2. Housing

Hutment life was by far better. Because it was open air and everything was visible and available. Here we are behind closed doors. (Interviewee at Mankhurd, 2006)

We gained a good house. This was a big gain. In our entire life, we couldn't have gotten a house like this. We would not dream that we would get it. We had problems to get sticks and wood to build our hut. So from where could we have imagined building a house such as this? (Interviewee at Mankhurd, 2006)

By looking at Figure 4.1. and 4.2., the housing conditions of the displaced households, especially the facilities within the houses, appeared to have generally improved. From the above two quotations, however, a more detailed analysis of the household interviews is necessary to reveal more diverse views about their housing conditions.

4.2.1. Water and toilet

The resettler's level of satisfaction over water and latrine facilities was generally improved, in comparison to their previous conditions. Acquiring a private toilet inside their house was well accepted, especially by those in Mankhurd and Anik Runwal who used to live along the railways and had to defecate on open ground (Table 4.1.):

Here, the toilet facility is inside the house and is safe. Before, we had to go out and it was dangerous because of the railway tracks. (Interviewee Mankhurd, 2006)
The resettlers' satisfaction about having private toilets within their houses was especially important for women, who previously had been using the outdoors, which was unsafe, particularly at night.

Table 4.1. Types of toilet in the resettlers' previous settlements.

<table>
<thead>
<tr>
<th>Types of previous toilet of displaced households</th>
<th>JVLR (N=16)</th>
<th>Mankhurd (N=16)</th>
<th>Anik Runwal (N=16)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Common</td>
<td>14</td>
<td>10</td>
<td>11</td>
<td>35</td>
</tr>
<tr>
<td>Open ground</td>
<td>1</td>
<td>6</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>48</td>
</tr>
</tbody>
</table>

Sources: Interviews with 48 original allottees

The level of satisfaction over water supply differed substantially, depending on the resettlement site and how adequately the site's infrastructure provided water. While the settlers in JVLR had only a few complaints about their water supply, the households interviewed in Mankhurd and Anik Runwal had serious concerns. The average available time of water supply was 117 minutes per day in JVLR and households usually had a water tank inside their houses to store water at that time (Table 4.2.). In contrast, the average available time was 43 minutes in Mankhurd and 35 minutes per day in Anik Runwal. These are average times. Many families in Mankhurd and Anik Runwal had to obtain drinking water from a common water tap outside their houses at the resettlement site (Figure 4.3.). In Anik Runwal, some of the respondents mentioned purchasing drinking water from water vendors at the price of 5-10Rs (US$0.1-0.2) for a 20 liter can, amounting to approximately 40-50Rs (US$0.9-1.1) per day.\footnote{The price to purchase water from the water vendors seemed to depend on the 'surplus' services. For instance, if a purchaser wants the vendor to bring water up to the upper floors of a building, the price increases.} Consequently, on average, the resettlers' satisfaction about
water supply in their new site was worse, when compared to their satisfaction about water supply in their previous homes. At the new sites, water supply was inadequate for some families, which led to further costs in time and money, compared to their previous situations.

Table 4.2. Types of water supply in the resettlers’ previous settlements.

<table>
<thead>
<tr>
<th>Types of previous water supply of households</th>
<th>Average available time in resettlement sites (min)</th>
<th>Water supply satisfaction (&quot;-1&quot;=worsened, &quot;1&quot;=improved)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common tap</td>
<td>Private tap</td>
<td>Others</td>
</tr>
<tr>
<td>JVLR (N=16)</td>
<td>7</td>
<td>44%</td>
</tr>
<tr>
<td>Mankhurd (N=16)</td>
<td>11</td>
<td>69%</td>
</tr>
<tr>
<td>Anik Runwal (N=16)</td>
<td>12</td>
<td>75%</td>
</tr>
<tr>
<td>Total (N=48)</td>
<td>30</td>
<td>63%</td>
</tr>
</tbody>
</table>

Note: Others include using both well and common tap, both tanker and common tap, common pump, and common tap with hose.
The reason for the lack of water supply is usually because of a low water pressure to pump the water up to the water tank at the top of each building. In the case of JVLR and Anik Runwal, the comparative height of the apartments made it difficult to bring the water up to the water tanks.48 The inadequate water pressure in Mankhurd, however, appears to be the result of a different reason. According to a cooperative housing society leader in Mankhurd, the slums located next to the resettlement site have newly built toilet facilities that use water from the same water pipe, which reduces the water pressure in the resettlement site. The federation of cooperative housing societies in Mankhurd had appealed for an inspection from the Brihanmumbai Municipal Corporation, but the problem was not resolved, owing to a timely disconnection of the water pipe to toilets in the slums, just prior to the inspection.

48 As for JVLR, the complaints come from the dwellers in buildings that are built on higher ground, compared to the other buildings. In the case of Anik Runwal, the resettlement site that comprises a few thousand households is built along a hill thereby reducing the capacity to provide sufficient water supply.
4.2.2. Tenure security

One of the common debates in the literature on housing policies is the degree to which granting legal title to houses motivates people to invest in housing improvements. Those who emphasize the importance of legal title promote the tenure regularization of slum settlements (Friedman, Jimenez, and Mayo 1988; Malpezzi and Mayo 1987; The World Bank 1993), while others argue that tenure security perceived by slum dwellers depends on a mixture of factors, such as size of settlement, political protection through contacts and/or votes, and level of provision of services by authorities (Angel 1983; Payne 2002).

The interviewees, in fact, demonstrate a different perspective on how perceived tenure security and housing improvements are correlated. Although the cooperative housing societies are still not registered, many interviewees at the JVLR site feel less secure in their resettlement sites, compared to their previous houses in slum areas. In fact, many people in JVLR felt safer in their previous houses in slum areas where they were receiving bills in their own names. Most of the interviewees replied that they 'owned' their houses in their previous settlements, though they did not have legal title. This is surprising, since those in Anik Runwal, who were also without legal title to land, generally felt more secure in their resettlement sites. One factor may be that people in Anik Runwal, who were living along the railway line, felt more insecure in their previous housing vis-à-vis those along the road, as some of them knew that the land on which they resided belonged to the government and they had been enduring occasional threats and rumors of eviction. In addition to electricity bills in their own names, and tangible threats of eviction, the length of stay in their previous houses, the degree to which they were known within the community, and their effort and money spent on constructing and renovating their houses seemed to reinforce their perceived tenure security in the hutments from which they were resettled. Therefore, an
announcement that the project gives legal title does not, on its own, enhance their perception of security, until they can see tangible proof such as their names appearing on utility bills.

One consequence of this lack of perceived tenure security in the resettlers' new residences is their lack of incentive to improve the conditions at their resettlement sites. This is especially apparent with the resettlers' reluctance to cooperate or pay the maintenance fees to their respective cooperative housing societies, as mentioned in Chapter 3.

4.2.3. Maintenance of housing

One of the criticisms against the relocation project was the steep rise in the resettlers' expenses for new housing such as for rent or installment payments on loans (Abrams 1964, p.85; Laquian 1971, p.14; Perlman 1976, p.215; Turner 1976). In this resettlement project, the government utilized TDRs for land acquisition and apartment construction, to provide new dwellings that were rent-free. As a result, the occupants were only responsible for paying maintenance charges to operate and maintain the buildings.\(^49\)

From the interviews, the resettlers said they found both advantages and disadvantages in shifting to the resettlement sites, in terms of housing maintenance expenses. One of the benefits, according to the respondents, was the minimized expenses for plastic sheets and other equipment to prevent water from leaking into their houses, which cost approximately 1,000Rs. (US$23) every year (Figure 4.4):

\[^49\] The maintenance charges collected by the cooperative housing societies usually included fees for garbage collection, and upkeep of common facilities such as hallway lights.
Every year, preparation for the monsoon problems was there: water coming in; rats problem; and dirty smell of the gutter coming in. ...Every year, we had to put mud to elevate the level of the house. (Interviewee at Mankhurd, 2006)

Other possible benefits may be realized through resettlement when the harm done to indoor furniture, cost for utilities, and the distress resulting from water coming into their houses, which could cause sleep-related problems, were all taken into account.

![Figure 4.4. Photograph of flooding in the slum settlements.](image)

Nevertheless, some of the maintenance expenses in the resettlement sites have grown, since utilities were improved or increased. In addition, some of the maintenance expenses escalated since resettlers were provided utilities on a rental basis\(^{50}\) or paid nothing for their utilities in the previous settlements. The total monthly payments, on average, for water, toilet, electricity, and maintenance (including garbage collection, in particular) was 273Rs. (US$6) at the resettlers' previous settlements (Table 4.3.). This

\(^{50}\) As an example, some slum dwellers connected their electricity lines to their neighbor's lines where a meter had already been installed. In this way, a fixed price for electricity might be negotiated with the neighbor to allow the electricity connection.
expense increased, on average, to 300Rs. (US$7) per month excluding water, electricity, and property tax for JVLR, 300-500Rs. (US$7-11) for Mankhurd, and 100-200 Rs. (US$2-5) for Anik Runwal.51

Table 4.3. Expenses for housing maintenance in the resettlers' previous settlements.

<table>
<thead>
<tr>
<th>Figures in Rs./month</th>
<th>Water</th>
<th>Electricity</th>
<th>Maintenance</th>
<th>Toilet</th>
<th>Others</th>
<th>Total monthly maintenance payment in previous settlement (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>JVLR (N=12)</td>
<td>73</td>
<td>237</td>
<td>1</td>
<td>10</td>
<td>21</td>
<td>368 (US$8.3)</td>
</tr>
<tr>
<td>Mankhurd (N=10)</td>
<td>45</td>
<td>157</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>173 (US$3.9)</td>
</tr>
<tr>
<td>Anik Runwal (N=14)</td>
<td>94</td>
<td>152</td>
<td>2</td>
<td>9</td>
<td>1</td>
<td>264 (US$6.0)</td>
</tr>
<tr>
<td>Average (N=36)</td>
<td>73</td>
<td>182</td>
<td>1</td>
<td>7</td>
<td>7</td>
<td>273 (US$6.2)</td>
</tr>
</tbody>
</table>

*Others include “taxes” and chawl committee fees.

The people had different attitudes with regards to the rise in maintenance and utility expenses. Some accepted the fact that they had more convenience at their new facilities and were willing to pay the extra amount, as long as the facilities were functioning properly:

51 Sources are from the research interviews with the 48 displaced families. According to the Investigation Report by the Inspection Panel, the monthly water fee was fixed at 110Rs. (US$2.5) per apartment unit, and modal electricity charges per apartment was about 300Rs. (US$6.8) (The Inspection Panel December 21, 2005, p.149, 228). This research was not able to confirm whether or not the figure given by the respondents included water for Mankhurd.
This is a building. That was jhopadpatti. When we were staying in the hutment, we always felt that people staying in the building are better off and we would also love to stay in a building. We never dreamed that we would one day be staying in a building. We have to pay [the increased expenses] because we are living in a better place. If we want to live in a better place, we have to pay for it as well. It's normal. (Interviewee at Mankhurd, 2006)

Other resettlers who, for instance, were in circumstances where paying a maintenance charge of 300Rs. per month was a strain to their earnings, were reluctant to pay the extra costs and had a negative attitude about paying the charges:

In that house, we didn't have to pay for rent and water. Only expense was for electricity and monthly toilet charges. Here, the expenses have gone up. And from the salaries, we have to pay this. From 2,000-3,000Rs. [US$45-68]. What can we do? (Interviewee at JVLR, 2006)

These families seemed to be unable to adjust to their new situation, which would require a substantial modification in their capacity for housing maintenance, in shifting from hutments to medium-rise apartments.

As mentioned in the Introduction, the literature on housing in poor countries indicates that slum dwellers prefer low-rise, over medium-rise housing (Hamdi 1991; Perlman 1976; Turner 1976). This preference has led to a proliferation of slum upgrading strategies rather than construction of new public housing by international agencies such as the World Bank (The World Bank 1993). On the other hand, Mukhija (2003) reports that slum dwellers in Mumbai tend to prefer the upper stories in their new medium-rise apartments. In this research, however, the slum dwellers' preference for upper floors in medium-rise apartments appears to be conditional. The cooperative housing society's
financial capacity to operate elevators is a crucial determinant for the apartment dwellers to accept medium-rise housing. In the case of JVLR buildings, most cooperative housing societies have the financial capacity to operate the lifts, and hence, most residential apartment dwellers are not bothered living in the upper floors of the buildings. From the interviews, this is explained by the fact that they can get away from mosquitoes, noise, and garbage on the ground level, while allowing fresh air to come inside their dwellings. Due to financial constraints, however, the cooperative housing societies in Mankhurd were unable to operate their elevators. This led to extra burdens on those who must obtain water from the ground level, and has made many of the elderly members in families homebound. Thus, the residents stated that the upper floors are sold for cheaper prices than apartment units on the ground floors.

Another aspect of housing maintenance, with which the resettlement sites have not been able to cope, is solid waste collection. The common behavior of resettlers is to throw both solid and liquid wastes out of their windows (from any floors!) onto the ground below. This has caused the common spaces within the resettlement sites to become full of piles of litter and trash. A more serious problem developed at JVLR, as the litter clogged the gutters along the pathways and caused the septic tanks to overflow into common open spaces during peak drainage discharges. The problem was temporarily resolved by approaching a local politician to have the gutters cleaned, and by the MMRDA that put concrete lids over the gutters and covered the litter on the ground with concrete (Figure 4.5.). Although a worker is usually hired by each cooperative housing society to clean each building, at the time of this research, no arrangements had been made to clean the common spaces shared by all cooperative housing societies at all three sites.

52 The average household income of those at JVLR is higher than the average income for those at Mankhurd or Anik Runwal (Appendix 4).
4.2.4. Opportunities for income-generating activities

Relocation projects are often criticized by scholars for the limited opportunities in the resettlement sites for small, income-generating activities, that are prevalent in many slum and squatter settlements (Misra and Gupta 1981; Perlman 1976; Turner 1976). For example, those who once managed small retail shops at the front of their homes, such as cigarette shops or grocery stores, may now have apartment units in the upper floors of medium-rise housing that would prohibit them from the same activities. If a household's source of income is from this type of small businesses, requiring higher-income customers, the household may be compelled to leave the resettlement site and return to the slum areas where such businesses are feasible.

Resettlement, under the MUTP, identified three types of structures: "residential," "residential-cum-commercial," and "commercial" as being present in the resettlers' previous
slum settlements, to provide different types of apartment units in the resettlement sites. In this resettlement project, residential-cum-commercial structure owners are given the option to choose between one residential apartment unit, which may be on any floor, or one commercial apartment unit on the ground level.

The theory from the housing policy discourses, stated above, seems to apply to the resettlement sites under the MUTP. The resettlement site complexes consist of approximately 1,000-5,000 displaced households and lack potential higher-income customers in the neighborhood. Although the JVLR complex, for example, is designed to allow as many commercial apartment units to face the main road as possible, the limited area along the main road restricts customers from frequenting the shops that might be located inside the complex (Chesterton Meghraj Property Consultants Private Limited 2006, p.23). Furthermore, the finite land area available for the resettlement site also limited the commercial space at ground level.

In this research, 10 of the 48 interviewed households once conducted some kind of business activity in their previous homes. Not all of them, however, were identified as "residential-cum-commercial" structures in the Basic Socio-Economic Surveys, since some of their structures were not authorized for business, and no documents were available to authorize their commercial activities. Since the cooperative housing societies do not allow the occupants to establish shops and stands within the sites, those having a livelihood that depends on small-scale commercial activities, established their new markets along the

---

53 Residential and commercial structures are those which are used exclusively for either residential or commercial purposes, and residential-cum-commercial structures refer to those where residence and business are combined within the same structure.

54 The unauthorized structures include small handcarts and stands that can easily be set up and dismantled.
roads.\textsuperscript{55} (Figure 4.6.). Furthermore, this research found that those who once conducted businesses in their previous houses, were generally suffering from curtailed turnovers, because of the poor locations of their new shops.

![Figure 4.6. Photograph of new commercial establishments along the resettlement site.](image)

4.3. \textbf{Accessibility to Jobs and Services}

There we were next to the railway tracks, the children will get hurt on the railway tracks. This fear was always there, which is absent in this house. (Interviewee at Mankhurd, 2006)

The distance to get things has increased since things are much cheaper in previous locality. I have to go back to the previous place for daily shopping. Here the price is high. (Interviewee at JVLR, 2006)

\textsuperscript{55} In some cases, the societies decided to allow shops that were needed by residents, such as newspaper stands.
4.3.1. Accessibility to jobs

The average commuting time and the number of commuters using public transport, increased in all three resettlement sites. In the JVLR subproject, since the new resettlement site was within 2 km from most of the resettlers' previous houses, the average increase in commuting time was only 15 min (Table 4.4). In JVLR, the proportion of those using public transit to commute increased by only 12 points (18% to 30%) (Table 4.5.). This was one of the main successes of the JVLR subproject – finding a resettlement site that was close to the people's original settlements. Thus, the extra burden that might have been due to increased travel expenses can be considered to be relatively low. In Mankhurd, the average increased time for commuting was minimal (12 min), as the resettlement site is close to a train station (Mankhurd station). Nevertheless, in Mankhurd, those using public transit became inflated by 23 points (36% to 59%), mainly because of the increase in train usage. The site with the worst accessibility conditions was Anik Runwal. Although the proportion of those using public transit underwent a relatively moderate increase of 15 points (21% to 36%), the average increase in travel time was 35 min. This is explained by the fact that, to reach the nearest train station, a bus ride of approximately 15-20 min is necessary, which has a low frequency schedule, and the job opportunities in Anik are limited.
Table 4.4. Average commuting times before and after resettlement.

<table>
<thead>
<tr>
<th></th>
<th>JVLR</th>
<th>Mankhurd</th>
<th>Anik Runwal</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Standard deviation</td>
<td>Mean</td>
<td>Standard deviation</td>
</tr>
<tr>
<td>Previous commuting time (N=97)</td>
<td>20</td>
<td>23</td>
<td>23</td>
<td>18</td>
</tr>
<tr>
<td>Current commuting time (N=104)</td>
<td>35</td>
<td>24</td>
<td>35</td>
<td>21</td>
</tr>
<tr>
<td>Difference before and after shifting</td>
<td>15</td>
<td>17</td>
<td>12</td>
<td>22</td>
</tr>
</tbody>
</table>

Note: Difference before and after shifting is a simple subtraction of previous commuting time from current commuting time.

Sources: Interviews with 48 original allottees
Table 4.5. Number of earning members with their associated modes of commuting of earning members before and after resettlement.

<table>
<thead>
<tr>
<th></th>
<th>JVLR</th>
<th>Mankhurd</th>
<th>Anik Runwal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home-based</td>
<td>9</td>
<td>23%</td>
<td>5</td>
<td>15%</td>
</tr>
<tr>
<td>Walk</td>
<td>13</td>
<td>33%</td>
<td>11</td>
<td>33%</td>
</tr>
<tr>
<td>Bus</td>
<td>5</td>
<td>13%</td>
<td>4</td>
<td>12%</td>
</tr>
<tr>
<td>Train</td>
<td>2</td>
<td>5%</td>
<td>6</td>
<td>18%</td>
</tr>
<tr>
<td>Bus and train</td>
<td>0</td>
<td>0%</td>
<td>2</td>
<td>6%</td>
</tr>
<tr>
<td>Others</td>
<td>11</td>
<td>28%</td>
<td>5</td>
<td>15%</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>100%</td>
<td>33</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Before</th>
<th>After</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Home-based</td>
<td>1</td>
<td>3%</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Walk</td>
<td>11</td>
<td>37%</td>
<td>6</td>
<td>14%</td>
</tr>
<tr>
<td>Bus</td>
<td>7</td>
<td>23%</td>
<td>4</td>
<td>9%</td>
</tr>
<tr>
<td>Train</td>
<td>2</td>
<td>7%</td>
<td>20</td>
<td>45%</td>
</tr>
<tr>
<td>Bus and train</td>
<td>0</td>
<td>0%</td>
<td>2</td>
<td>5%</td>
</tr>
<tr>
<td>Others</td>
<td>9</td>
<td>30%</td>
<td>11</td>
<td>25%</td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
<td>100%</td>
<td>44</td>
<td>100%</td>
</tr>
</tbody>
</table>

Note: Others include motorcycles, rickshaws, and wheelchairs.
Sources: Interviews with 48 original allottees

The effect of resettlement on jobs and businesses seems to correlate with the accessibility conditions of each site (Table 4.6.). The resettlement site with the worst accessibility issues, in terms of commuting time, Anik Runwal, has the highest proportion of residents who either had to change or quit jobs due to this resettlement (32%), and the Mankhurd site, with the easiest access to a train station, had the lowest proportion (12%)\(^{56}\).

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\(^{56}\) The total loss of income due to quitting or changing jobs as a direct result of the resettlement was 42,652Rs. (US$964)/month for the 48 interviewed households in this research, amounting to roughly 511,824Rs. (US$11,567)/year.
Table 4.6 Number of earning members with the effect of resettlement on their jobs in three different sites.

<table>
<thead>
<tr>
<th></th>
<th>JVLR</th>
<th>Mankhurd</th>
<th>Anik Runwal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No change</td>
<td>27</td>
<td>68%</td>
<td>14</td>
<td>42%</td>
</tr>
<tr>
<td>Changed not due to</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>resettlement</td>
<td>3</td>
<td>8%</td>
<td>11</td>
<td>33%</td>
</tr>
<tr>
<td>Quit not due to</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>resettlement</td>
<td>3</td>
<td>8%</td>
<td>4</td>
<td>12%</td>
</tr>
<tr>
<td>Changed due to</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>resettlement</td>
<td>0</td>
<td>0%</td>
<td>4</td>
<td>12%</td>
</tr>
<tr>
<td>Quit due to</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>resettlement</td>
<td>7</td>
<td>18%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Others</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>100%</td>
<td>33</td>
<td>100%</td>
</tr>
</tbody>
</table>

Sources: Interviews with 48 original allottees

The questions now become: Who had to change or quit their jobs? What type of employment was the most vulnerable? In what ways did they change jobs to adapt to their new circumstances? The type of employment that was affected the most by this resettlement, in fact, was the private businesses or shops with a fixed location. In this group, two people had changed their jobs and four people had quit their jobs. Those who had changed jobs seemed to be adapting to their new environment by starting private businesses without a fixed location or by becoming temporary employees.

The next type of job that was severely vulnerable to the resettlement was the home-based businesses. The majority of people in this group were women dealing with bhindi\(^{57}\) making, papad\(^{58}\) making, or stitching. Although the income from these business activities is usually low compared to full-time jobs outside the house, they provide an

---

\(^{57}\) Bhindi is an Indian decorative ornament worn on a woman’s forehead.

\(^{58}\) Papad is a thin wafer typically served as an accompaniment to a meal.
important opportunity for homebound women to work and earn extra income to support the family while taking care of their children at home (Tipple 2005). The loss of this source of income seems to depend on the intensity of family's social network in the new locality, namely the degree to which a family has contacts with those who can offer these types of businesses or those who know how to get in touch with these businesses:59

Sitting at home we could have done something – that we feel is important. ...If we were there, may be we would have done something. There, little jobs that could be done at home were available, like bhindi. We also got small job to be done on necklace like tying it. Those kinds of jobs are not available here. Even if it was available, we do not know about it, because we are too far away. And people here do not do such jobs either. Small small jobs are done by no one here. ...There even packing jobs were available. (Interviewee at JVLR, 2006)

4.3.2. Accessibility to services

Accessibility to various facilities changed according to the nature of their previous settlement locations as well as by the degree to which the new area's economic base was developed (Figure 4.7.). Despite the fact that the JVLR subproject was successful in finding a resettlement site on the same road, within 2 km from the resettlers' previous houses, many families still relied on the ration card shops60 and hospitals with which they were acquainted in their previous slum areas. Furthermore, since a large proportion of households previously lived closer to the train station (Jogeshwari station) on the same road, many had to travel increased distances to go to the station. All of the children in school,

59 In fact, statistical analysis shows that the change in social networks correlates with the change of and resignation from jobs. A Pearson correlation for the change in number of known people and those helping the respondents with the number of family members who have changed or quit their jobs was -.399, which is significant at the 0.01 level (Appendix 7).

60 Ration card shops offer essential commodities such as grain at subsidized rates, and are supported by the government for those with limited income. Each card holder is registered at one ration card shop.
however, did not need to transfer, which should be considered as a major achievement of the JVLR subproject. The transfer of schools due to resettlement is sometimes associated with increased school drop-outs.

With respect to Mankhurd, most of the people are from slum areas along the railways that are a few train stations away from Mankhurd. The main difference from the JVLR subproject is that after five years of living in the resettlement site, the residents organized a new ration card shop and a religious facility (Hindu temple) through the help of the NGO in charge of the project. The nearest train station (Mankhurd station) is fairly close (10 min, by walking), so most families found it to be closer and safer. The main concern in terms of accessibility in Mankhurd was in finding public schools and hospitals at the new locality.

The people in Anik Runwal had the most severe accessibility problem. The resettlement site is situated in the periphery of the city with a relatively poor economic base for providing the people with sufficient services. The nearest train station (Mankhurd station) is roughly 4 km away and a 15-20 min bus ride is necessary. Public hospitals, ration card shops, and religious facilities are not available at the locality, so that most of the people still use their previous facilities.
4.4. Social Assets

There was community feeling, a group feeling there. We stayed a long time there. Love of the people was there. Our group has been split. Some are still there, some have come here. (Interviewee at JVLR, 2006)

I am happy with the fact that the fights which used to happen there is not here. I had many troubles. Here no problem. (Interviewee at JVLR, 2006)

Even though previous research and evaluations have frequently neglected the importance of social dispersion from relocation, this research reveals that the change in social assets of the households is the most crucial factor determining their housing
preference between their current and previous locations.61

4.4.1. Social networks

In general, the number of people with whom a resettler is familiar, was reduced because of this resettlement. Those who could expand their social network were mostly the members of the cooperative housing society committees. In comparing the three different sites, those in Mankhurd seemed to be least affected by social networks due to the resettlement, or were able to restore the number of acquaintances after five years in the resettlement site. The people in JVLR and Anik Runwal site, however, seemed to be suffering from losses in the number of people in their social networks.

Opportunities for generating income, as the literature suggests, are not only ascribed to the physical environments of medium-rise buildings, but also to the social networks through which families acquire information about job opportunities. Primarily, the number of people with whom the resettlers were familiar seemed to have an influence on their access to information and, consequently, their opportunities for employment:

[Our income will decrease] because I don't find anything here from which any income can be generated. If I had continued over there, I could have done something, got help from friend or someone to start some business. There someone could have helped me. Here there is no one capable of helping. (Interviewee at JVLR, 2006)

61 The binary logistic regression analysis using resettler's housing preferences and dependent variable and changes in housing, access to jobs, access to services, and social assets as independent variables shows that the changes in social assets has the highest explanatory power among the four independent variables (Appendix 6).
We lost the known people, known neighborhood, better source of income. Because we knew the place, our income was better. But here, we have lost all of that. There, we knew many people and we were able to earn our living. That environment is gone. Source of earning, we lost. See today, it is only through contacts that one gets jobs. Here we don't have any. (Interviewee at JVLR, 2006)

Second, establishing new shops in such markets appears to be contingent upon the availability of social connections with those who are already occupying the area:

Stand in Vikhroli [previous settlement] is a well established and know as my stand. Starting a shop in a new location requires money. And I don't have that kind of money. Over a period of time, the place where I put up my stand is recognized as my place. In a new location, I have to get permission from the person in charge of the place and pay a kind of deposit and end up paying rent. In Vikhroli, there is a kind of union which will protect me against demolition despite not having license. (Interviewee at Anik Runwal, 2006)

Those who had lost social connections through resettlement and previous commercial establishments found it extremely difficult to start new businesses at the new locality.

4.4.2. Level of cooperation

The level of cooperation depends highly on the diverse social structure and atmosphere that was present in the resettlers' previous settlements, the number of people who were able to come together in groups, and other external factors such as demolition, that can enhance the cohesion among resettlers. Another reason seems to derive from the physical dimension of the resettlement sites, as the two diverse opinions below demonstrate:

In this house, there is more privacy. In case there is a flight, neighbors don't have to know. (Interviewee at JVLR, 2006)
On the ground floor [in the previous house], I felt freedom of accessibility to everywhere and everyone. Here I feel closed within walls and do not have that feeling. I feel claustrophobic. (Interviewee at JVLR, 2006)

Even though it is extremely difficult to generalize about the impact on the level of cooperation among the resettlers, the change in the size of social network tends to correlate with the level of cooperation, to help solve neighborhood problems. In fact, the cooperative housing societies that function well, seem to be comprised of members from the same settlements:

Most people in the building are known to them. So we don't have a problem. We communicate. We are all from the same chawl. Till now it has been running okay. As far as this building of ours is concerned, we feel that it will continue. On a monthly bases, we gather 350Rs.[US$8]. This extra 50Rs.[US$1] is used as an emergency fund. It can be used for any additional expense that the building has to undergo. It is also available for individual families in times of crisis. If there are someone who has to be hospitalized on an emergency bases, we can't dream of going to the bank when it is closed. So they can borrow up to 5000Rs.[US$113]. It is like an emergency fund. The chief promoter and all the members are good thinkers. And they are all well-educated. When we celebrate festivals, we don't go house to house gathering money like some other buildings. This is a special building. Automatically, from the society fund, 50Rs.[US$1.1] in everybody's name goes for the celebration of the festivals. In addition to that, if one feels like going and giving any further, one can go to the collection committee and give it. Otherwise, automatic procedure is from the fund, everyone's name 50Rs. goes. (Interviewee at JVLR, 2006)

The statistical analysis shows that the change in social networks correlates with the change or level of cooperation among neighbors. The Pearson correlation for change in number of known people and those helping the respondent, with the level of cooperation of neighbors to solve problems was .472, which is significant at the 0.01 level (Appendix 8).
4.5. Indirect Impact on Other Assets

4.5.1. Income

My sons are there. They are trying to get permanent jobs. And within the next five years, they should manage to get successfully. And they are trying to learn new things. So they will definitely be better. So therefore, the income will increase. (Interviewee at Mankhurd, 2006)

When we were staying there, we had the facilities to earn our living. Here we are absolutely useless, because we have no job opportunity. (Interviewee at Mankhurd, 2006)

Income is an essential part of this research analysis, yet it is extremely difficult to present the analysis of it for three reasons. First of all, it is often strenuous to make respondents understand the concept of income. The distinction between income and expenditure seemed to be confusing for the interviewees and their replies mostly came from their overall feelings about how much they were suffering, in terms of their financial situation. Often, the interviewees said that “income had decreased” even though their income had actually increased and it was the expenditures that were inflated to put more pressure on their household economy.63

Even after the concept of income was conveyed, the problem of acquiring the true figures remained, which may have persisted in the context of interviews with a researcher who was trying to understand the problems of the project and the needs of the households.

63 Therefore, the question of how “household expenditure had changed” was asked prior to the question about income change, to reduce this confusion. The reply about income was also cross-verified with information about each member’s earnings before and after resettlement.
In some cases, the low total household income reported by a respondent did not correspond to the high quality and quantity of utilities and items possessed by the family within the house. Furthermore, the NGO staff agreed that a considerable portion of the income data—at best an estimate—may have been grossly inaccurate. I made every effort to depoliticise the interviews by stating that no direct or personal benefits will be delivered to the interviewees, and by keeping NGO staff, cooperative housing society leaders, and those not related to the family out of the house during interviews. Nevertheless, I abandoned using household income figures for this reason.

Another difficulty associated with the information about income was related to the issue discussed in the Introduction, that is, the consideration of the 'development curve' in the analysis. Many families had new breadwinners who were in their late-teens or early-20's who had begun working after resettlement, thereby, increasing their household income. Whether or not this pattern was an improvement, would be debatable, however, since the new income earners might have given up education to support their families in financial crisis. For example, the self-declared total household income increased for many households in Mankhurd and Anik Runwal (Figure 4.8.).

Privacy during interviews was also imperative as some families with maintenance charge debts were cautious not to let their neighbors or society leaders peek into their room with the lights on.
This was often an outcome for younger members of a family when beginning to earn income, and especially for families in Mankhurd that resettled five years ago. When changes in the number of income earners are taken into account, both Mankhurd and Anik Runwal have low proportions of families with increased income (Figure 4.9.). Anik Runwal had the largest proportion of families with decreased income, while Mankhurd had the smallest proportion. JVLR scored high in terms of proportion of families with increased income, yet had the second highest proportion of families with decreased income, when changes in the number of laborers is considered. Although this categorization is somewhat crude, Figure 4.9. shows that families with deteriorated access to jobs tend to have decreased income after resettlement, as hypothesized in the Introduction, which is especially severe for those in Anik Runwal.

\[65\] This is also confirmed by the strong correlation between changes in the number of earning household members and changes in self-declared household income. The Pearson correlation between the change in number of earning household members and change in self-declared household income was .612, which is significant at the 0.01 level (Appendix 9).
Note: In this graph, families with change in the number of earning members are coded differently. Income change is labelled “no change” when household income has increased accompanying increase in earning members, or when household income has decreased accompanying decreased in earning members. Income change is labelled “increased” when household income has increased with fewer or the same number of earning members. Income change is labelled “decreased” when household income has decreased with more or the same number of earning members.

Sources: Interviews with 48 original allottees.

Figure 4.9. Change in household income after considering change in number of laborers.

Equally important is the resettlers' prospects of future household income. An extremely low proportion of residents in JVLR and Mankhurd replied that their income will decrease, whereas one-third of the families in Anik Runwal replied that their income will decrease in the next five years (Figure 4.10.).
Furthermore, relatively new resettlement sites, such as JVLR and Anik Runwal, have higher proportions of resettlers who cannot predict their future incomes. In addition to the length of stay in their new houses and in their jobs, statistical analysis shows that the people's prospect of future income is also correlated with change in expense for commuting.\(^{66}\) Hence, those with increased travel expenses tend to envisage lower future incomes. Lastly, the prospect of future income is correlated with a change in the level of cooperation in the neighborhoods.\(^{67}\) The resettlers who feel that their neighbors are not cooperating to solve neighborhood problems are more doubtful about their future financial situations.

4.5.2. Health

The health conditions for the displaced households seem to have deteriorated

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\(^{66}\) The Pearson correlation between the prospect of future income and the change in travel expense for commuting was .436, which is significant at the 0.01 level (Appendix 10).

\(^{67}\) The Pearson correlation between the prospect of future income and the change in level of cooperation was .377, which was significant at the 0.05 level (Appendix 11).
according to the quality of water supply in their resettlement sites.\textsuperscript{68} In fact, Anik Runwal, indicating the lowest health conditions, also had the worst water supply issues of the three resettlement sites. Some of the cooperative housing society leaders actively invited us to witness the brownish color of the tap water. According to the society leaders, the underground water tank was broken, which allowed dirt and sewage to enter it. Some of the people in Mankhurd also had to obtain drinking water from a common tap outside, due to the low tap water pressure, and yet, no one discussed any hygienic issues about the water. Of 48 households, 14 responded that the frequency of sickness and health problems among their family members (excluding age-related health issues) had increased and 13 of 48 households replied that the frequency of job absence due to sickness had increased after resettlement. On average, Anik Runwal scored the lowest points, and JVLR scored the highest points for these two questions.

In summary, the physical environment and conveniences within houses had improved due to the resettlement. This finding should still be carefully examined in relation to the financial capacity of households and the cooperative housing societies to manage and maintain their facilities, as discussed in detail in Chapter 3. Access to jobs and services has generally decreased in all three resettlement sites. The impact of the change in access to jobs had severe effects on the employment of the displaced families, especially those in Anik Runwal. Considering the fact that the JVLR site is close to the resettlers' original localities and is surrounded by a strong economic base, the access to services, social assets, and household economy may be restored within a few years, as was the case in Mankhurd, since a 'learning curve' seems to exist in improving one's circumstances:

\textsuperscript{68} The Pearson correlation between the quality of water supply and the change in health conditions was .315, which was significant at the 0.05 level (Appendix 12).
I know it [household income] will increase. We are gaining experience. In this one year of living in this house, we have gained some knowledge of budgeting and how to plan the expenses with the income we have. So for the next year we will do a better job. (Interviewee at JVLR, 2006)

After coming here, my business has gone down to a certain extent, but I'm trying to re-establish myself by working harder, by taking clothes for ironing from people around, and bringing it here and doing the jobs, and going and delivering it back. (Interviewee at JVLR, 2006)

When the negative pressure from resettlement bears down upon the household assets, families use different strategies to surmount such crises. The ways by which they do this are neither sustainable nor preferable, for example, by selling household items or “tightening belts, eating less, or making congee instead of rice to get more quantity and make the children's stomach feel full.” A further dimension of this analysis is whether or not the resettlers prefer to move out of the sites, and if they do, why, which is discussed in the following chapter.
5. Families Moving Out: Leasing and Selling Apartment Units

The Investigation Report, by the Inspection Panel, supports many of the impacts analyzed in previous chapter, such as income loss, higher travel expenses, and income erosion. Nevertheless, the information gathered in this research suggests a perspective for the planning and implementation of the resettlement, which differs from the analysis provided in the Investigation Report based on the World Bank's Involuntary Resettlement Policy (OD 4.30). For instance, the Report points out the insufficient institutional capacity and knowledge of the NGOs, and the lack of public consultations for alternative road and resettlement site design (The Inspection Panel December 21, 2005). This research, in fact, indicates that the Report did not demonstrate a complete picture of the factors that were complicating this displacement. Before elaborating on such issues, however, I begin with an analysis on who left the resettlement sites and why, which provides an insight overlooked by the Investigation Report.

5.1. Who Left the Sites and Why?

The previous chapter only dealt with the original allottees who were available for interviews. As shown in Table 5.1, however, a considerable proportion (28%) of the dwellings had already been vacated by the original allottees. This could have occurred in four different ways, by: 1) locking up the apartment and living somewhere else; 2) leasing or lending the apartment to relatives; 3) renting out the apartment to non-relatives; or 4) selling the apartment to non-relatives. The proportion of those who had already left their

69 Often, in the fieldwork, it was difficult to identify whether or not a tenant is a relative of the original allottee of the dwelling, since non-relatives frequently declare themselves to be relatives,
resettlement sites and who preferred their new residences, varied according to the resettlement site.\textsuperscript{70} The resettlement site having the highest proportion of resettlers who preferred their current housing was Mankhurd (55\%) (comprised of those who resettled into permanent housing in 2001). Mankhurd also had the highest proportion of original allottees (91\%), as opposed to relatives of original allottees or non-relative tenants. The JVLR site, comprised of those who resettled in 2005, had the second-highest proportion of resettlers who preferred their new homes (32\%) and the second highest proportion of original allottees who were still staying (71\%). The resettlement site that would be considered to be the least satisfactory of the three was Anik Runwal, which had only 14\% of the households preferring their current housing, and only 55\% of the original allottees staying.

\textsuperscript{70} Since many apartments were present where the original occupants were not available for interview, additional samples were randomly chosen to replace the unavailable households. Consequently, the total number of households approached for interviews was 94, from which 48 were chosen.
Table 5.1. Apartment units approached and their occupancy status in three resettlement sites.

<table>
<thead>
<tr>
<th>Original allottee occupying flat</th>
<th>Original allottees interviewed</th>
<th>Prefer current house</th>
<th>Prefer previous house</th>
<th>No preference</th>
<th>Original allottees not available for interview</th>
<th>&quot;Relatives&quot;**</th>
<th>&quot;Tenants&quot;** (not related to the original allottees)</th>
<th>Original allottees never came to site**</th>
<th>Locked (Don't know if the occupant is original allottee)</th>
<th>Total approached flats</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>JVLR</td>
<td>Mankhurd</td>
<td>Anik Runwal</td>
<td>Total</td>
<td>JVLR</td>
<td>Mankhurd</td>
<td>Anik Runwal</td>
<td>Total</td>
<td>28</td>
</tr>
<tr>
<td>Original allottee</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9</td>
<td>12</td>
<td>6</td>
<td>27</td>
<td>100%</td>
</tr>
<tr>
<td>occupying flat</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>32%</td>
<td>55%</td>
<td>14%</td>
<td>29%</td>
<td>100%</td>
</tr>
<tr>
<td>Original allottee</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td>4</td>
<td>10</td>
<td>20</td>
<td>21%</td>
</tr>
<tr>
<td>not occupying flat</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>21%</td>
<td>18%</td>
<td>23%</td>
<td>21%</td>
<td>21%</td>
</tr>
<tr>
<td><strong>&quot;Relatives&quot;</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td><strong>&quot;Tenants&quot;</strong> (not related to the original allottees)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>2</td>
<td>9</td>
<td>16</td>
<td>16%</td>
</tr>
<tr>
<td><strong>Original allottees never came to site</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Locked (Don't know if the occupant is original allottee)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>4%</td>
</tr>
<tr>
<td>Total approached flats</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>28</td>
<td>22</td>
<td>44</td>
<td>94</td>
<td>100%</td>
</tr>
</tbody>
</table>

**"Tenants" and "Relatives" are self-declared responses. Some tenants may have responded that they are relatives with the intent to comply with the Resettlement and Rehabilitation Policy.

**Information acquired through the members of cooperative housing society committee

Sources: Interviews with 48 original allottees and members of cooperative housing society committee
Changes in household assets also seem to be associated with the occupancy ratio of the original allottees, as resettlement sites with more households with increased assets seemed to have more original allottees staying (Table 5.1. and Figure 5.1.). Figure 5.1. shows the average change in each household asset for the three communities. From the figure, resettlers in the Mankhurd site, with the highest proportion of original allottees, generally recovered or improved their household assets, while families in the other resettlement sites had decreased household assets besides housing. Anik Runwal, which had the lowest proportion of original allottees, also had the lowest household assets among the three, with severe negative impacts on health and accessibility to jobs and services.
Since people understand that renting or selling out an apartment is unauthorized\textsuperscript{71}, such interviews were usually refused by the tenants. Additionally, it is difficult to find original allottees who rented or sold out their apartment. Therefore, only one interview was conducted with a relative of an original allottee who had leased the apartment, and one interview was conducted with a tenant who was currently occupying an apartment, without any systematic sampling.

\textsuperscript{71} According to the Resettlement and Rehabilitation Policy, original occupants are not allowed to sell or rent out their apartment units at the resettlement sites for the first 10 years.
Case 1. Emergency need of lump sum of money

One interview was with a relative of a woman who had left her apartment and moved into the interviewee’s place in the same resettlement site. She was working in a garment factory and her income was approximately 1,200Rs. (US$27)/month. The woman found a man who was willing to pay a rent of 2,000Rs. (US$45)/month with a deposit\textsuperscript{72} of 15,000Rs. (US$339). The woman had rented out the apartment for financial reasons. The money from the deposit and the rent goes towards feeding her 9-month old child. Before the resettlement, the woman got married against her relative’s wishes, and ran away with her husband. When she shifted to the resettlement site, her husband had an affair, and left her as an expectant mother. The 15,000Rs. deposit from renting out her apartment was spent on her child’s hospitalization, due to a respiratory problem.

Case 2. Brokerage involvement

In another apartment, four bachelor tenants had incomes above 10,000Rs. (US$226)/month, with some of them earning 25,000Rs. (US$565)/month. Their occupations were IT hardware engineer and film assistant directors. They acquired the apartment through a broker with a deposit of 30,000Rs. (US$678) and the rent was 5,000–6,000Rs. (US$113–136)/month. They do not participate in the cooperative society meetings as they cannot understand Marathi, which is spoken by the leaders. The respondent felt no attachment to the house, the society, nor the locality, and desired to move out as soon as he could find a new place. According to the respondent, the original allottee owns a house somewhere else.

\textsuperscript{72} Deposits for rental accommodations are usually given back to the tenants in full when they leave.
Reasons for some of the original allottees shifting out of the resettlement sites can also be understood by exploring the comments given by the original allottees who are currently living in the resettlement sites. Table 5.2. shows the number of those who are willing to stay in their resettlement sites (regardless of being reluctant to do so) and the number of those who are thinking of (or have attempted) leasing or selling their apartments.

Table 5.2. Prospect of leaving or staying at the resettlement sites.

<table>
<thead>
<tr>
<th>Q. Do you think your household members will be living in this complex for the next 5 years?</th>
<th>JVLR</th>
<th>Mankhurd</th>
<th>Anik Runwal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will stay here</td>
<td>5</td>
<td>3</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>Will stay here. &quot;Where else can we go?&quot;</td>
<td>1</td>
<td>6</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>Will stay here since cheaper that getting house elsewhere</td>
<td>9</td>
<td>4</td>
<td>13</td>
<td>30</td>
</tr>
<tr>
<td>Will stay here since selling is unauthorized</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Will give as rent</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Will sell</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Wants to be transferred to another resettlement site</td>
<td>5</td>
<td>0</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Can't predict</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>48</td>
</tr>
</tbody>
</table>

Sources: Interviews with 48 original allottees

While most households in Mankhurd stated that they were willing to stay in their apartments (13 of 16 households), roughly half of the respondents said that they will stay in JVLR or Anik Runwal. As for the interviewed households who were willing to leave, 5
households were in JVLR and 4 households were in Anik Runwal, but only 1 household was in Mankhurd. The main reason that was given for wanting to leave the resettlement sites, however, differed for those in JVLR and Anik Runwal. The reason given by the households in the JVLR site was the “low” floor area of the new apartments for accommodating their current family members or potential relatives who may be living together in the future. Most of these respondents do not necessarily desire to return to their previous places, but instead, plan to acquire a larger house elsewhere, as they described:

The area is very less compared to our place before so we cannot invite other people and parents. The main problem is the area. (Interviewee at JVLR, 2006)

If the sons get married, how can we stay in such a small house? And we will need a separate room for ourselves as well. So a bigger place will be needed. In the next five years, I think we will move to 2,3 room with a kitchen. (Interviewee at JVLR, 2006)

On the other hand, the respondents in Anik Runwal wanted to leave the place to regain their sources of livelihood by returning to their previous localities. Their reasons seem to be because of the high expenses associated with the maintenance and traveling:

I will make efforts to approach MHADA [Maharashtra Housing and Area Development Authority] to get our house transferred to another locality which is closer to our place where we are doing our business. (Interviewee at Anik Runwal, 2006)

73 Not all of those who replied said that their apartment was small or that they had larger floor areas in their previous neighborhood. The opinion about a room being small or sufficient seemed to depend on the number of family members and the possibility of a family member’s being married within the next five years.
I am thinking of selling this house and taking another one in Sion area [from where I have come]. Because I am not able to manage the expenses. It's too high in this house. (Interviewee at Anik Runwal, 2006)

In essence, if the displaced families stay in the resettlements on their accord, the outcome of this resettlement would be considered as achieving its minimum goal – to satisfy the resettlers. In this section, four possible reasons are presented to explain why the original allottees leave, or are willing to leave their apartments. In the first case, the family used their apartment as an asset to urgently obtain a lump sum of money needed to pay for the baby's hospitalization expenses. In fact, since the occupants did not consider selling the house, as opposed to obtaining the deposit to be returned to the tenant, this case shows that the family needed a loan to help overcome their family crisis. The unavailable women's savings group or the community revolving fund at this site led the family to rent out the apartment.

The second case is more problematic, in that it suggests that some kind of brokerage exists at the resettlement site(s). In some cases, tenants seem to gain power by becoming a member of the society's committee, which can create large suspicions among the occupants. In fact, this type of “upward filtering” – the buying-out of lower-income residents by the middle class – has been reported in the literature on different types of housing projects (Doebele 1987; Laquian 1971, p.14; Misra and Gupta 1981; Payne 2001, p.423; Peattie 1982; Turner 1986, p.15; Ward 1983, p.40). Some sources suggested that this occurred through various channels in the resettlement project, which is discussed further in the next section. The relevant questions here are: Through what kind of channel(s) had the brokers tapped into the apartments? What impact did this have on the overall outcome of this resettlement project? Had the resettlement project failed to benefit the poor and, instead, provided
apartments on easy terms to the brokers?

Third, some of those who wish to move out from their resettlement sites are asking for apartment units with larger floor areas. In fact, some of the occupants had houses that were larger than 225 sq.ft., as prescribed in the Resettlement and Rehabilitation Policy to be their alternative apartment in the resettlement site. Furthermore, some respondents claimed that resettlement sites should offer different types of apartment units, with different floor areas, and that families should be allotted to apartments according to the floor areas in their previous houses. If less floor area is creating a high dissatisfaction among those who had larger houses, and is leading them to leave their apartments, what are the policy implications? Should different types of dwellings, with different floor areas, be considered for the resettlement sites?

Lastly, what lessons can be learnt from those who wish to move out of their resettlement sites and return to their previous settlements, for the sake of their businesses? What possible remedies could be offered for this?

5.2. Unauthorized Capture of Benefits

The major concern among the NGOs and planners at the MMRDA, in fact, pertains to the complexities and intricacies of the system of Mumbai slums, which has been reported by some scholars with regards to the ‘piracy’ of development and the speculation on slum land (Desai 1995; Pillai 1991; Pugh 1990, p.260). In situations where a huge amount of benefits are dispersed in a specific time, as in this resettlement project, a great interest is
generated among those seeking to grasp the opportunities. In fact, some of the “failures” that were pointed out in the Investigation Report may have been influenced by such activities during the project.

The first channel by which one could obtain benefits from the project is by subdividing one's house into two (or three), by creating a partition wall and assigning different names for the new rooms, to make two houses from one. In this way, residents would be provided two apartment units in the resettlement site instead of just one. This was explained to us by some residents in the resettlement sites during the interviews as something that leads to a dissatisfaction among the occupants who do not achieve the surplus benefit, especially by those who had larger houses.

Another type of unauthorized capture of benefits from this project took place in previous slum settlements. Since the road alignment had changed from the initial plan of 30 m to 45 m in the JVLR subproject, a sudden intrusion of people into the area seemed to occur during the time of the change in alignment. These people then claimed for an eligibility for an apartment in the resettlement site. Such changes in the road alignment created huge opportunities for slumlords to invade land and gain apartment units in the resettlement site.

Even after the demolition had taken place along the road, the activity was still observed. According to one interviewee, new commercial structures were built where the respondent's house once was, within the proposed right-of-way, and the commercial structure owners obtained documents through a political connection to 'prove' that they had been staying there, perhaps to seek alternative commercial spaces in the resettlement sites.
In fact, many commercial establishments were built along the road, mainly because the construction of the road was still incomplete, even one and a half years after the demolition, to create opportunities for such encroachment. Some residents also informed us that municipal officials, from time to time, came to monitor the areas and prevent encroachment, but would leave after receiving bribery from the encroachers. The process is similar to the way by which many slum settlements were developed along the roads in the first place. Although the MMRDA entrusted the responsibility of protecting right-of-ways after demolition to NGOs and community-based organizations (IL and FS Ecosmart Limited 2006), groups with less authority compared to the main implementing agency were unable to monitor or protect the encroachment. Further speculations along the newly constructed road are anticipated to gain future benefits from the Slum Rehabilitation Scheme or from other road improvement projects.

The crucial issue in the request for inspection submitted by some commercial associations, in fact, seems to be the 'slumlords' negotiating for exaggerated benefits. While the Inspection Panel feels that the requesters' proposals should be accepted, NGO staff and planners on the ground argue that the organization leaders are just 'landowners' of the commercial structures and do not actually live in the slums. This was confirmed in an informal interview in a slum area where a commercial association is negotiating for a better relocation site. During an interview with a tenant who was opening a grocery shop in the area, the informant revealed that more than half of the land to be demolished was owned by a single commercial 'landlord'. The informant was also given no guarantee to be able to stay in the commercial space of the proposed resettlement site.

74 One NGO staff member expressed her concern about the illegal speculation along the road alignment when a series of communal toilets were built from the support of a political party that intended to capture compensation when the slum area applies in the future for the Slum Rehabilitation Scheme.
In these situations, two factors should be mentioned. From the above cases, the changes in road design clearly created 'space' for this unauthorized capture of benefits. In considering this aspect, the Investigation Report attributed "many of the failures" of this resettlement project to "the assumption that the NGOs that had dealt with the resettlement in the rail component would also be able to handle the resettlement of the PAPs [project-affected persons] affected by the road component." (The Inspection Panel December 21, 2005, p.57-58). The difference between the rail and road components of the project was not only in the fact that the road components affected more middle-income, commercial shopkeepers, but also that they offered more opportunities to capture the benefits of the project. Second, the practitioners' concern was that holding public consultation "as early as possible" in the Project cycle, as recommended by the Inspection Panel (The Inspection Panel December 21, 2005, p.89-92) may have created 'space' for such illegal speculation and capture of benefits. While the Inspection Panel criticized the implementing agencies, including the NGOs, for not consulting at the time of the project design and not allowing for inputs into the decision-making on alternative road designs, these procedures may become problematic when acquiring slum land is flexible as in the case of Mumbai. As the involuntary resettlement policy of the World Bank (OD 4.30) rightly points out, "developing mechanisms to prevent illegal encroachers and squatters, including an influx of nonresidents entering to take advantage of such benefits, from participating in the compensation arrangements" (The World Bank 1990) is crucial for implementing relocation. The importance of systematic disclosure of information about the project, as the implementing agencies' "mechanisms to prevent illegal encroachers", was left out of the analysis in the Investigation Report. In other words, some of the criticisms in the Investigation Report were aimed at the outcome of strategies devised and carried out by the
local organizations, to prevent ineligible encroachers from taking advantage of the project.

Moreover, "treat[ing] customary and formal rights as equally as possible, in devising compensation rules and procedures" (The World Bank 1990, p.30), as demanded by the World Bank's safeguard policy, may not be congruent with the context of Mumbai. In fact, this policy seems to have sprung from the World Bank's abundant experience in rural relocations, where providing "[l]and, housing, infrastructure, and other compensation... to adversely affected population, indigenous groups, ethnic minorities, and pastoralists who may have usufruct or customary rights to the land or other resources take for the project" (The World Bank 1990) may only suit the rural context where legalization of land ownership is expected to play less of role in increasing the land price. In a city like Mumbai, however, the potential market value of legalized housing through redevelopment is significantly high (Mukhija 2003), and one can encroach on marginal land and easily create a forged document to 'prove' that one has been staying there. Local agencies thus should not be demanded to treat customary and formal rights equally and to provide individuals with the same floor area with full legal title or to provide compensation at market rate, as this will only facilitate the 'piracy' of land invasion and the 'downward raiding' on marginal land to price the poor even further out of the city.

The findings from this research agree in some aspects with the Investigation Report about the outcomes and impacts of this resettlement, yet the analysis of the implementation processes and underlying factors that shaped the outcome of the project differs from that of the Inspection Panel. In fact, the Inspection Panel only highlights one extreme issue from those recommended in the World Bank's policy, and neglects the complex land tenure issues of the city, politics involved with slum land acquisition, and relationships between
'slumlords' and occupants, which have given structured the resettlement implementation. In summary, a partial application of the policy may restrain the local agencies in their implementation, as the World Bank’s policy may not always be congruent with the intricacies of slum settlements.
6. Conclusion

The experience of Resettlement and Rehabilitation, under the MUTP, demonstrates that with appropriate financial, technical, and social support, resettlers can be willing to move and may be satisfied with their new premises and living environment, as in the case of the people in Mankhurd. Much of this was facilitated by the development of the city’s first resettlement policy that entitled resettlers to certain project benefits, and the financing mechanism for site acquisition and building construction that eliminated rent or payment for apartments. In these aspects, the resettlement was a dramatic improvement over the city’s past relocation projects. The overall evidence, however, from the three communities analyzed in this resettlement, makes it difficult to say with confidence that the displaced households were ‘developed’ through displacement.

As emphasized in the introduction to this thesis, various methods can be used for evaluating and comparing a resettlement project. In this research, the chosen method compared the livelihoods of resettlers before and after resettlement, to test the hypothesis that “urban resettlement is a form of development for those being displaced,” as proposed by the World Bank. The Bank’s position seems to be derived from its narrow angle on urban resettlement, which simply looks at changes in physical housing quality (The World Bank 2004a, p.289-92). By using a household asset framework, however, this research reveals that the resettlers’ preferences for housing in the current resettlement sites, compared to housing in the previous slum settlements, is determined by factors that go beyond basic housing standards, and include influences on economic, social, and hygienic areas, as well. If resettlement is evaluated only on the basis of the housing standard, or on the basis of household income, the analysis cannot realistically reflect the potential success or failure of
It is difficult to assess the degree to which the three different processes of relocation used to stratify the samples as a research methodology (i.e., the resettlement in 2000, the use of transit camps, and the resettlement in 2005) influenced the outcome. By comparing the three case studies, however, two points can be extrapolated. First, for the resettlers, a period of learning takes place about their new environment, immediately after resettlement, which is followed by a period of adjustment to the new environment. For example, the interviewees at JVLR have been experiencing their learning curve in coping with their new conditions, while those in Mankhurd showed some degree of adjustment. Second, the two-step process of resettling into a transit camp and then into the permanent sites, as occurred in Anik Runwal, complicates the administrative tasks for the project agencies and creates more complexities and a longer readjustment period for the resettlers.

There are many layers of problems that occurred in the resettlement under the MUTP, which need to be addressed in future resettlement projects. First of all, in applying the World Bank's involuntary resettlement policy during the preparation of resettlement policies and plans, the effects of efforts to consult with the public in earlier stages of project design on slumlords' opportunities to capture benefits must be explored. The MUTP teaches us that a mere demand for stronger commitment to compensate and to consult with the public may restrain local agencies from devising ways to prevent unauthorized capture of benefits. Moreover, unauthorized benefits that might be captured by landlords would create additional burdens for the implementation agencies. Along the same line, policy-makers need to be aware that involving residents in planning and determining the project design can be problematic in certain cases, as sudden speculations and encroachment can arise to
reap the project benefits to prevent such speculation. Future resettlement action plans or implementation plans must clearly state the schedules for surveys, public disclosure of project design and entitlements, relocation of affected families, and road constructions. All designs for the transport component should be finalized before the information is disclosed. All areas covered by a survey should account for the potential changes in alignments, and surveys should be conducted before information is disclosed about the project. In addition, the World Bank or other funding agencies should not demand implementing agencies to treat those with customary rights to land in the same way as formal rights, in cities that have an intricate system of land occupation and method for claiming rights.

After the household surveys and identification of affected structures, attention should be paid to maintaining existing social networks and community structures and preparing the communities for relocation. In order to maintain existing networks, community-wide relocation should be followed. This would include preventing relocation procedures induced by transport components that might change the cooperative housing society patterns that were present in their previous settlements. Ways to officially register cooperative housing societies and women's savings groups, prior to a resettlement, should be considered to facilitate trouble-free, post-resettlement activities and the dispersion of funds for reimbursement or compensation. In addition, financially preparing communities through savings and credit schemes for the transition period when the funds from the project cannot be distributed to the cooperative societies may enhance the affected households' sense of involvement in the resettlement initiative, which may be conducted by local NGOs after forming cooperative housing societies in the original slum settlements. Furthermore, urgent demolition in resettlers' original settlements and the use of transit camps should be avoided.
The primary reason for the shortfall of this resettlement, however, is the Resettlement and Rehabilitation Policy's overemphasis on physical dimensions of housing, basing measurements on the city's 'free-housing' scheme – the Slum Rehabilitation Scheme – which was created for redeveloping slum settlements on site. The essential endeavor in a relocation project of this type should not only be to consider the physical environment, from low-rise villages to medium-rise apartments, but to consider the relocation-specific impacts and the way in which resettlers organize themselves to manage and maintain their new form of housing.

With respect to preventing resettlement specific impacts, the selection of relocation sites is the most pertinent task in any relocation project. The acquisition of land for resettlement sites under the MUTP relies on the market-oriented use of TDRs (Chapter 2, Section 2), and since the mechanism for evaluating the social and environmental impacts of the sites is weak and vague, the developer receiving the TDRs may have been the only party to receive benefits. Hence, considerable guidance should be in place for the use of TDRs, to builders to develop resettlement sites that are close to the resettlers' original settlements and for incorporating the social dimension (e.g., distance to public schools and hospitals) when evaluating the suitability of potential resettlement sites. Some options to guide developers for acquiring sites closer to the resettlers' original sites are: 1) to provide financial assistance in addition to TDRs, strictly for the purpose of purchasing land in a good location; and 2) to allow the use of developable floor area on certain designated plots to the south of the plot where TDRs originate, to prevent developers from acquiring resettlement sites in the southern areas of the city to accommodate resettlers from the northern areas.
Secondly, the capacity of the cooperative housing societies must be seen as the crucial element for the sustainable maintenance of the resettlement sites. The means to achieve this could be through social programs to instruct committee members about how to keep their accounts, on one hand, and through guiding occupants to understand how their maintenance charges are being used and to monitor the society committee, on the other. This could be achieved, for instance, by teaching the resettlers how to understand the accounts. In addition, the development of some kind of constitution or set of rules for each society, in conjunction with the occupants and committee members, may be useful, and could be best carried out with the assistance of local NGOs. An exchange of experiences with some of the other successful cooperative societies from past projects under the Slum Rehabilitation Scheme might also be helpful.

The task of the NGOs in this phase of resettlement should be to identify, categorize, and clarify all agreements concerning the responsibilities of society members, leaders, and NGOs that are in charge, to facilitate each of the actors to fulfill their duties. With this aim in mind, the NGOs should not make unrealistic promises before resettlement, or fail to keep their promises with the resettlers. Furthermore, NGOs should be sensitive to the dependency of residents on external assistance and should try to bring out internal effort and commitment by the residents and society committees when providing support during the post-resettlement phase. In some cases, NGOs may have to obtain a definite promise from cooperative housing societies before providing specific types of support. To assist with NGO's efforts, the implementation agency should not devolve its tasks that are difficult to be carried out by NGOs, which do not enjoy the same level of official powers as that of the

75 Currently, a private consulting firm is developing a manual to run a cooperative housing society for the NGOs, to teach and to enforce on society members and the committees, with little consultation with the occupants.
implementation agency. Misbehaviors of residents at the resettlement sites arising from personal interest is better dealt through official power structures of implementation agency rather than through cooperative societies or NGOs. Hence, although the literature often promotes decentralizing project tasks to NGOs and/or project beneficiaries with the intent to increase efficiency in implementation, the observations from the MUTP indicate that merely devolving project tasks to NGOs and beneficiaries may be inefficient, and in some cases, may create additional burdens on the implementation agency as well as on the NGOs.

Another blind spot in this resettlement project is in the lack of care for those people who once conducted commercial activities and now live in residential dwellings. The essential point here is the livelihood effects of resettling from settlements with high flexibility in conducting commercial activities, into settlements which are built and regulated under direct control by the state, and how to cushion the negative effects of such formalization process. Because of the new illegal commercial markets that have emerged near the resettlement sites, considerable scope was present for permitting some of these activities within the site. The activities could be in the form of hand carts and stands that could be easily set up and dismantled, or in the hawking of goods in apartments that might require membership so that only the resettlers would be allowed to sell items. As one interviewee stated, the mere resettling into an apartment does not automatically lead to increased earnings:
The lift cannot be started. If the lift starts working, maintenance charges go up and people cannot afford that. Although we have been elevated from jhopadpatti to flat dwellers, our level of income and our thinking is still jhopadpatti dweller. From where will we get the money? We are poor people. The environment here is not conducive for progress. People do small jobs and no one thinks of the future and going and working in a better place. And the education level of the people here is very low. (Interviewee at Mankhurd, 2006)

To get the issue in perspective, the mitigation of encroachment in the first place on land designated for future development projects is pertinent for the sake of governments to reduce the social and economic cost of development projects. The most important considerations here are the government's effort to provide affordable and serviced land for housing for the newly arriving residents to the city and how this interacts with the ambiguous registration system and land ownership. As seen in the resettlement under the MUTP, when land ownership and registration system are being manipulated through the use of political networks, any strategies with good intentions to assist the poorer beneficiaries can provide loopholes through which the richer and more powerful can engage in speculative purposes. Addressing the issues of land ownership and registration, in fact, is a cumbersome task, as many residents, especially the less educated ones, are not conscious of the illegality pertaining to squatting on other people's property and the procedures for registration, in addition to the political nexus allowing the patronage of those willing to pay government officials to obtain the 'permission' to encroach. However, the city should cope with the perplexities and ambiguities of the registration system and gradually improve the transparency of land acquisition. In addition, since many development projects in Mumbai within the foreseeable future involve displacement of those already squatting on public land, administrative capacity should be built within the MMRDA to deal with coordination of surveys, managing electronic data regarding various compensation packages and eligibility
criteria of resettlers, and cooperative housing society management and maintenance issues.

If displacement is truly a form of development, a far stronger commitment must be demonstrated to improve the various social dimensions of the resettlers' livelihood, given the World Bank's optimistic view that such an objective is obtainable through various relocation measures and devices.
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Appendices
Appendix 1.

Conceptual framework of this research.

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Appendix 2.

Subprojects under MUTP by three strata and selected subprojects.

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<tr>
<td></td>
<td><strong>Sub-Total</strong></td>
<td></td>
<td><strong>6716</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Resettled in 2001 (6)</strong></td>
<td>5th and 6th Kurla-Thane</td>
<td>Antop Hill, Dharavi, and Mankhurd</td>
<td>no data</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Borivali-Virar Quadrupling rail Project</td>
<td>Antop Hill, Dharavi and Mankhurd</td>
<td>no data</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5th line between Santacruz-Borivali</td>
<td>Antop Hill, Dharavi and Mankhurd</td>
<td>no data</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Optimization projects of WR</td>
<td>Antop Hill, Dharavi and Mankhurd</td>
<td>no data</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Optimization projects of Harbor lines</td>
<td>Directly to Mankhurd in 2000</td>
<td>no data</td>
<td>selected</td>
</tr>
<tr>
<td></td>
<td><strong>Sub-Total</strong></td>
<td></td>
<td><strong>4032</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Total Displaced Households under MUTP</strong></td>
<td></td>
<td></td>
<td><strong>20118</strong></td>
<td></td>
</tr>
</tbody>
</table>

HH=households, WR=Western Railway, CR=Central Railway, ROB=Road-over-bridge,

*Sampling for this stratum is not weighted due to the unavailability of data on number of households

Sources: (The World Bank, p.30) Bank Management Response to Request for Inspection, India: Mumbai Urban Transport Project (IBRD Loan No.4665-IN; IDA Credit No. 3662-IN)
Appendix 3.
Interview schedule for the 48 original allottees.

Interview Schedule for Research on Resettlement and Rehabilitation under the Mumbai Urban Transport Project

ID#:____________________________________________

Sub-project:____________________________________

Area:___________________________________________

Building No.:___________________________________

Floor level of interviewee's dwelling:___________

Date:___________________________________________

Interviewer:____________________________________

Translator:_____________________________________

Interpreter:_____________________________________

Language:_______________________________________

Time Started:___________________________________

Time Completed:_______________________________
A. Demographic Section
The first several questions are about your background.

1. (Interviewer note the person’s gender)
   a. Female   b. Male

2. What is your relationship with the household head?
   a. Self
   b. Spouse/partner
   c. Son/daughter
   Others:

3. Please list all the members of this household residing in this dwelling with their gender, age, marital status, years of education, literacy level (ability to read and write letters and words), occupation, and relationship with the head of household. [BSES]

<table>
<thead>
<tr>
<th>No. of members</th>
<th>Relationship with head of household</th>
<th>Gender</th>
<th>Age</th>
<th>Marital status</th>
<th>Years of education</th>
<th>Ability to read and write Hindi</th>
<th>Present at interview (interviewer note)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Head</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>3.</td>
<td></td>
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<td></td>
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<tr>
<td>4.</td>
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<tr>
<td>5.</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Please tell me your household members’ primary language (language used within household) [BSES]: __________________________

5. Where does this household originally come
(If not originally from Mumbai) how long have you been in Mumbai? ____________ years

6. If you don’t mind, could you please tell me your household members’ religion? [BSES] ________________

7. If you don’t mind, could you please tell me your household members’ caste? [BSES] ________________

8. What is the name of the neighborhood before you came here? [BSES] ________________

9. When did your household move here? ________________

B. Transit Site (if applicable)
The next several questions are about the situation in the transit site.

10. Did you live in a transit site? Which transit site did you live in? [BSES]

11. For how long did you live in the transit site? [BSES]

12. What were the problems that you had in the transit site from the following aspects?

<table>
<thead>
<tr>
<th>Type of Problems</th>
<th>Problems</th>
<th>How the household coped with the problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing condition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access to jobs, schools and other facilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health conditions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neighbors</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
13. Did any of your household members change jobs due to relocation to the transit site? If so, why.

C. Process of shifting to the current house
The next several questions are about the process of shifting to the current house.

14. How much time did your household have from the day of allotment to the day of shifting? Was it enough?

15. Did you have any problems during your move to this house? If so, what were the problems?

16. Did you know that your household is entitled to monetary compensation for the cost of moving to the present site?
   a. Yes  b. No  c. Others:
   (If yes,) did you obtain any monetary compensation for the cost of moving?
   a. Yes  b. No  c. Others:
   (If yes,) could you please tell me the amount of compensation?
   How adequate do you think the compensation for the cost of shifting was?
   (If no,) could you please tell me why your household did not obtain compensation?

D. Housing Conditions
The next several questions are about the conditions of your dwelling, both before and after
17. In what type of housing did you live before resettlement? How many floors? How many rooms?

18. Before resettlement, how did your household own or rent their house? [BSES "Impact Category"]
   a. Owner of land and building
   b. Lessee of land and buildings
   c. Lessee tenants or sub-tenants of buildings
   d. Squatter structural owners
   e. Squatter tenants
   f. Don't know
   g. Not applicable:
   h. Other:

19. If there was any payment (such as rent) for the previous house, how much did you pay per month:

20. How much did you spend in your previous house for water charges, electricity charges, maintenance charges, and toilet charges, if any?

   Water . Electricity . Maintenance . Toilet . Other:

21. How long did your household live in your previous house?:

22. Did you conduct any business activity at your previous house before resettlement? [BSES]
   a. Yes    b. No

   (If yes,) what business activity did your household conduct? [BSES]
23. What was the floor area of your dwelling before resettlement?
[BSES]________________________
24. The next section is about your housing conditions. Please tell me whether the following factors have increased, had no change, or decreased, comparing the dwelling before resettlement to the current dwelling.

<table>
<thead>
<tr>
<th>Factors</th>
<th>Increased</th>
<th>No Change</th>
<th>Decreased</th>
<th>Not applicable</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleanliness of gutter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amount of green space</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amount of open space between buildings</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impact from flooding</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality of garbage collection</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opportunities for domestic income generating activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality of pathways and access to main road</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Availability of water supply</td>
<td></td>
<td></td>
<td></td>
<td>Before:</td>
<td></td>
</tr>
<tr>
<td>Quality of latrines facilities</td>
<td></td>
<td></td>
<td></td>
<td>Before:</td>
<td></td>
</tr>
<tr>
<td>Fear about losing your house</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Availability of electricity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protection from weather such as heat and rain</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impact of industrial pollution</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level of privacy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level of noise</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
25. Out of the points of housing conditions just mentioned, which issue do you feel is the most important?

How is your household coping with this issue?

26. Did your floor height change due to the resettlement? If so, how do you think the quality of life has changed due to the change in the floor height?

27. Do you feel that you have been handed all the documents for the proof of possession of the current house?
   a. Yes  b. No  c. Others:
   (If yes or no,) could you please tell me why:

28. Did you know that you could have participated in determining the plan and design of the resettlement site?
   a. Yes  b. No  c. Others:
   (If yes,) did any of your household participate in designing the plan of the resettlement site?
   a. Yes  b. No
   (If yes,) could you please tell me how the person participated in it?

How much do you think you have influenced the design of the
29. Did your household have any option other than your current house?
   a. Yes    b. No    c. Others:
   (If yes,) Please explain:
   Could you please tell me why your household did not take the other option?

30. How often do your household members participate in Cooperative Housing Society meetings?
   Who:
   a. Every meeting    b. Often    c. Sometimes    d. Never    e. Others:

31. How well do you think that your Cooperative Housing Society can manage and maintain this building?
E. Accessibility to Jobs and Services

32. The next several questions are about your household's access to jobs.

<table>
<thead>
<tr>
<th>No. of members (age)</th>
<th>Occupation</th>
<th>Income/month</th>
<th>Time and cost of commuting</th>
<th>Mode of travel</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before resettlement</td>
<td>current</td>
<td>length of current job</td>
<td>Before</td>
</tr>
<tr>
<td>1. Head</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

33. Did any of your household members change or quit jobs due to the relocation to current house? If so, how?

34. Did any of your household members change or quit schools due to the relocation to current house? If so, how?

35. Did you know that your household could obtain monetary compensation for increased commuting distance to your present job?

   a. Yes       b. No       c. Not applicable

   (If yes,) did any of your household members obtain any monetary compensation?

   a. Yes       b. No

   (If yes,) could you please tell me how much the person obtained?
How adequate do you think the compensation for increased fare to commute was?

(If no,) could you please tell me why your household members didn’t obtain the compensation?

36. How has the time to reach the following facilities changed due to resettlement?

<table>
<thead>
<tr>
<th>(Interviewer note)</th>
<th>Increased</th>
<th>No Change</th>
<th>Decreased</th>
<th>Not applicable</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Childcare facilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schools</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospitals, health clinic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ration shop</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grocery store</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religious facilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Train station</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

37. What is the most important problem with traveling from your current house?

How is your household coping with this problem?

F. Health and Labor

The next several questions are about your household's health and ability to earn income. Please tell me whether the following factors have increased, had no change, or decreased, comparing the situation before resettlement to the current situation.
38. How has the followings changed from the situation before resettlement to after resettlement:

<table>
<thead>
<tr>
<th></th>
<th>Increased</th>
<th>No Change</th>
<th>Decreased</th>
<th>Not applicable</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of school absence due to sickness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of job absence due to sickness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequency of sickness of your household members</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

39. What health problems does your household have after resettlement, if any?
   How is your household coping with the problem?

40. Do you think that your household members have enough education such as degrees, certificates, and diplomas, or skills to obtain the jobs they want or increase their earnings?

   a. Yes  b. No  c. Others:

   (If no,) why do you think so?

41. Do you know that household members can participate in vocational training programs?

   a. Yes  b. No  c. Others

   (If yes,) is any of your household members participating in any vocational training program?

   a. Yes  b. No

   (If yes,) could you please tell me how the person participated in it?
How adequate do you think the vocational training program was to obtain the job that the person wants?

(If no,) could you please tell me why your household members did not participate in it?

G. Income and Financial Assets
The next several questions are about the income and financial assets of your household.

42. Has your household income increased or decreased since you resettled to the present house?
   a. Increased    b. No change    c. Decreased

(If "increased" or "decreased") Why is that?:

43. Has your household expenditure increased or decreased since you resettled to the present house?
   a. Increased    b. No change    c. Decreased

(If "increased" or "decreased") Why is that?:

44. [For R+C structures only] Did your household members know that household members could have obtained monetary compensation for loss of jobs?
   a. Yes    b. No

(If yes,) did any of your household members obtain monetary compensation for loss of jobs?
   a. Yes    b. No

(If yes,) could you please tell me how much the person obtained? 163
How appropriate do you think the compensation for loss of jobs was?

(If no,) could you please tell me why your household members did not obtain?

45. Do your household members know that there is a community revolving fund that your household can borrow money from?

a. Yes  b. No  c. Others:

(If yes,) did any of your household members borrow any money from the revolving fund?

a. Yes  b. No

(If yes,) could you please tell me how much the person obtained?

How adequate do you think the money from the revolving fund was?

(If no,) could you please tell me why your household members did not borrow money from the revolving fund?

46. What financial problems does your household have after resettlement, if any?

How is your household coping with this problem?
**H. Social Assets**

The next several questions are about the social interactions of your household members.

47.

<table>
<thead>
<tr>
<th>How has the followings changed from the situation before resettlement to that after resettlement:</th>
<th>Increased</th>
<th>No Change</th>
<th>Decreased</th>
<th>Not applicable</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of people beyond your household who are willing help you if you need it</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of people beyond your household who know you in your community</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooperation in the neighborhood to solve problems in your community</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feeling of safety from crime and violence in your neighborhood</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

48. How many people beyond your household can you ask to borrow a small amount of money (about 100 Rs.)?

Out of those, how many are in the new complex?

Out of those, how many are STILL in the previous settlement?

49. Do you still go to your previous settlement? (If yes,) for what purpose?
50. What community-based organizations such as women’s saving groups, youth groups, sports groups, are your household members involved in?

51. Did your household members know that household could have resettled together with your friends and neighbors from your previous neighborhood settlement (but who did not need to resettle) to the resettlement site with you?

   a. Yes   b. No   c. Others:

   (If yes,) did any of your household members bring anyone with you to the resettlement site?

   a. Yes   b. No

   (If yes,) could you please tell me how you participated in determining this?

   How appropriate do you think the number people resettling with you was?

   (If no,) could you please tell me why your household members didn’t bring anyone?

52. What are the problems that you and your neighbors are facing, if any?

   Are you neighbors doing anything about these? Are you involved?

I. General Questions about Resettlement and Rehabilitation

The next several questions are about the resettlement under the Mumbai Urban Transport Project.

53. Did your household members know that there was an NGO (SRS, SPARC) to support you through the resettlement process?

   a. Yes   b. No   c. Others:
(If yes,) did any of your household members obtain any support from its staff?

   a. Yes   b. No

(If yes,) could you tell me what kind of support you obtained?

   How appropriate do you think the support was?

(If no), why didn’t your household obtain any support?

54. What is the most important asset that you have LOST from this resettlement?

   What is the most important asset that you have GAINED from this resettlement?

55. Do you prefer living in your current house or previous house?

   a. current house   b. previous house   c. no preference   d. Others:

   (If yes or no,) could you please tell my why:

56. How do you think the income of your household will change within the next 5 years?

   Could you please tell me why:

57. Do you think your household members will be living in this complex for the next 5 years?
Appendix 4.
Socio-demographic information of the resettlers in three resettlement sites.

<table>
<thead>
<tr>
<th></th>
<th>JVLR</th>
<th>Mankhurd</th>
<th>Anik Runwal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of residential tenements</td>
<td>983</td>
<td>1,814</td>
<td>1,559</td>
<td></td>
</tr>
<tr>
<td>Average family size</td>
<td>4.0</td>
<td>5.5</td>
<td>4.1</td>
<td>4.5</td>
</tr>
<tr>
<td>Current average earning member in family</td>
<td>1.2</td>
<td>1.8</td>
<td>0.8</td>
<td>1.3</td>
</tr>
<tr>
<td>Average monthly household income (Rs./month)</td>
<td>6,686</td>
<td>5,241</td>
<td>3,880</td>
<td>5,298</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Primary language</th>
<th>JVLR</th>
<th>Mankhurd</th>
<th>Anik Runwal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hindi</td>
<td>19%</td>
<td>19%</td>
<td>31%</td>
<td>23%</td>
</tr>
<tr>
<td>Marathi</td>
<td>50%</td>
<td>63%</td>
<td>50%</td>
<td>54%</td>
</tr>
<tr>
<td>Other</td>
<td>31%</td>
<td>19%</td>
<td>19%</td>
<td>23%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Religion</th>
<th>JVLR</th>
<th>Mankhurd</th>
<th>Anik Runwal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hindu</td>
<td>81%</td>
<td>44%</td>
<td>63%</td>
<td>63%</td>
</tr>
<tr>
<td>Muslim</td>
<td>0%</td>
<td>25%</td>
<td>31%</td>
<td>19%</td>
</tr>
<tr>
<td>Buddhist</td>
<td>13%</td>
<td>25%</td>
<td>6%</td>
<td>15%</td>
</tr>
<tr>
<td>Christian</td>
<td>6%</td>
<td>0%</td>
<td>0%</td>
<td>2%</td>
</tr>
<tr>
<td>Other</td>
<td>0%</td>
<td>6%</td>
<td>0%</td>
<td>2%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Origin</th>
<th>JVLR</th>
<th>Mankhurd</th>
<th>Anik Runwal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mumbai</td>
<td>50%</td>
<td>50%</td>
<td>44%</td>
<td>48%</td>
</tr>
<tr>
<td>Other district in state</td>
<td>19%</td>
<td>38%</td>
<td>19%</td>
<td>25%</td>
</tr>
<tr>
<td>Other state</td>
<td>31%</td>
<td>13%</td>
<td>38%</td>
<td>27%</td>
</tr>
</tbody>
</table>

Length of stay in Mumbai (those from other origin) (years)

| Source: Interview with 48 original allottees |

<table>
<thead>
<tr>
<th>Distance from nearest train station (Km)</th>
<th>JVLR</th>
<th>Mankhurd</th>
<th>Anik Runwal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.5</td>
<td>0.5</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Occupation in previous settlement</th>
<th>JVLR</th>
<th>Mankhurd</th>
<th>Anik Runwal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private business (fixed location)</td>
<td>15%</td>
<td>20%</td>
<td>38%</td>
<td>22%</td>
</tr>
<tr>
<td>Private business (without fixed location)</td>
<td>18%</td>
<td>20%</td>
<td>29%</td>
<td>21%</td>
</tr>
<tr>
<td>Private business (home-based)</td>
<td>5%</td>
<td>0%</td>
<td>10%</td>
<td>5%</td>
</tr>
<tr>
<td>Laborer (permanent)</td>
<td>53%</td>
<td>40%</td>
<td>5%</td>
<td>37%</td>
</tr>
<tr>
<td>Laborer (contract)</td>
<td>10%</td>
<td>20%</td>
<td>19%</td>
<td>15%</td>
</tr>
</tbody>
</table>

Sources: Interview with 48 original allottees
Appendix 5.
List of indicators and their associated question numbers in the interview schedule.

### Housing

<table>
<thead>
<tr>
<th>Factors</th>
<th>Code</th>
<th>Question No. in Interview schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor Code</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>No Change</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Decreased</td>
<td>-1</td>
<td></td>
</tr>
<tr>
<td>Floor area</td>
<td>1</td>
<td>23</td>
</tr>
<tr>
<td>Cleanliness of gutter</td>
<td>1</td>
<td>24</td>
</tr>
<tr>
<td>Amount of green space</td>
<td>1</td>
<td>24</td>
</tr>
<tr>
<td>Amount of open space between buildings</td>
<td>1</td>
<td>24</td>
</tr>
<tr>
<td>Impact from flooding</td>
<td>-1</td>
<td>24</td>
</tr>
<tr>
<td>Quality of garbage collection</td>
<td>1</td>
<td>24</td>
</tr>
<tr>
<td>Opportunities for domestic income generating activities</td>
<td>1</td>
<td>24</td>
</tr>
<tr>
<td>Availability of water supply</td>
<td>1</td>
<td>24</td>
</tr>
<tr>
<td>Quality of latrines facilities</td>
<td>1</td>
<td>24</td>
</tr>
<tr>
<td>Fear about losing your house</td>
<td>-1</td>
<td>24</td>
</tr>
<tr>
<td>Availability of electricity</td>
<td>1</td>
<td>24</td>
</tr>
<tr>
<td>Protection from weather such as heat and rain</td>
<td>1</td>
<td>24</td>
</tr>
<tr>
<td>Level of privacy</td>
<td>1</td>
<td>24</td>
</tr>
<tr>
<td>Level of noise</td>
<td>-1</td>
<td>24</td>
</tr>
</tbody>
</table>

**Indicator**

<table>
<thead>
<tr>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>169</td>
</tr>
</tbody>
</table>
### Accessibility to jobs

<table>
<thead>
<tr>
<th>No. of members in household</th>
<th>Time for commuting to jobs</th>
<th>Question No. in Interview schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Code</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Increased</td>
<td>No change</td>
</tr>
<tr>
<td>1. Head</td>
<td>-1</td>
<td>0</td>
</tr>
<tr>
<td>2.</td>
<td>-1</td>
<td>0</td>
</tr>
<tr>
<td>3.</td>
<td>-1</td>
<td>0</td>
</tr>
<tr>
<td>4.</td>
<td>-1</td>
<td>0</td>
</tr>
<tr>
<td>5.</td>
<td>-1</td>
<td>0</td>
</tr>
</tbody>
</table>

**Indicator**  
**Mean**

Note: Time for commuting to jobs is coded as “increased” (-1) for household members who had to quit jobs due to increased commuting distance.

### Change in expense for commuting

<table>
<thead>
<tr>
<th>No. of members in household</th>
<th>Expense for commuting to jobs</th>
<th>Question No. in Interview schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Code</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Increased</td>
<td>No change</td>
</tr>
<tr>
<td>1. Head</td>
<td>-1</td>
<td>0</td>
</tr>
<tr>
<td>2.</td>
<td>-1</td>
<td>0</td>
</tr>
<tr>
<td>3.</td>
<td>-1</td>
<td>0</td>
</tr>
<tr>
<td>4.</td>
<td>-1</td>
<td>0</td>
</tr>
<tr>
<td>5.</td>
<td>-1</td>
<td>0</td>
</tr>
</tbody>
</table>

**Indicator**  
**Mean**

Responses were coded as “increased” if the mode of commuting changed from “walk” to “bus” or “train,” “from “home-based” to “bus” or “train,” or from “train” to “bus.” Responses were coded as “decreased” if the mode of commuting changed from “bus” or “train” to “walk” or “home-based” or from “bus” to “train.”
### Accessibility to services

<table>
<thead>
<tr>
<th>Time to reach the following facilities:</th>
<th>Increased</th>
<th>No Change</th>
<th>Decreased</th>
<th>Question No. in Interview schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Childcare facilities</td>
<td>-1</td>
<td>0</td>
<td>1</td>
<td>36</td>
</tr>
<tr>
<td>Schools</td>
<td>-1</td>
<td>0</td>
<td>1</td>
<td>36</td>
</tr>
<tr>
<td>Hospitals, health clinic</td>
<td>-1</td>
<td>0</td>
<td>1</td>
<td>36</td>
</tr>
<tr>
<td>Ration shop</td>
<td>-1</td>
<td>0</td>
<td>1</td>
<td>36</td>
</tr>
<tr>
<td>Grocery store</td>
<td>-1</td>
<td>0</td>
<td>1</td>
<td>36</td>
</tr>
<tr>
<td>Religious facilities</td>
<td>-1</td>
<td>0</td>
<td>1</td>
<td>36</td>
</tr>
<tr>
<td>Train station</td>
<td>-1</td>
<td>0</td>
<td>1</td>
<td>36</td>
</tr>
<tr>
<td><strong>Indicator</strong></td>
<td><strong>Mean</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Social assets

<table>
<thead>
<tr>
<th>How has the followings changed from the situation before resettlement to that after resettlement:</th>
<th>Code</th>
<th>Question No. in Interview schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Increased</td>
<td>No Change</td>
</tr>
<tr>
<td><strong>Social network</strong></td>
<td><strong>1</strong></td>
<td><strong>0</strong></td>
</tr>
<tr>
<td>Number of people beyond your household who are willing help you if you need it</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of people beyond your household who know you in your community</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Level of cooperation</strong></td>
<td><strong>1</strong></td>
<td><strong>0</strong></td>
</tr>
<tr>
<td>Cooperation in the neighborhood to solve problems in your community</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Indicator** **Mean**
### Income

<table>
<thead>
<tr>
<th>Code</th>
<th>Question No. in Interview schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased</td>
<td>No Change</td>
</tr>
<tr>
<td>Change in household income</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: Question No. 42 asking the change in household income was cross-checked with the actual income figure before and after resettlement declared in Question 32.

### Income considering change in number of laborers

<table>
<thead>
<tr>
<th>Code</th>
<th>Question No. in Interview schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased</td>
<td>No Change</td>
</tr>
<tr>
<td>1. Change in household income</td>
<td>1</td>
</tr>
<tr>
<td>2. Number of earning members in household</td>
<td>1</td>
</tr>
</tbody>
</table>

Indicator: Subtraction of 2 from 1

### Health

<table>
<thead>
<tr>
<th>Code</th>
<th>Question No. in Interview schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased</td>
<td>No Change</td>
</tr>
<tr>
<td>Number of school absence due to sickness</td>
<td>-1</td>
</tr>
<tr>
<td>Number of job absence due to sickness</td>
<td>-1</td>
</tr>
<tr>
<td>Frequency of sickness of your household members</td>
<td>-1</td>
</tr>
</tbody>
</table>

Indicator: Mean

Mean 172
Appendix 6.
Logistic regression analysis output for the relationship between housing preference and changes in housing, accessibility to jobs, accessibility to services, and social assets.

<table>
<thead>
<tr>
<th>Case Processing Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unweighted Cases</td>
</tr>
<tr>
<td>Selected Cases</td>
</tr>
<tr>
<td>Missing Cases</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Unselected Cases</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

a. If weight is in effect, see classification table for the total number of cases.

<table>
<thead>
<tr>
<th>Model Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

a. Estimation terminated at iteration number 7 because parameter estimates changed by less than .001.

<table>
<thead>
<tr>
<th>Hosmer and Lemeshow Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Classification Table ^a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observed</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Step 1 preference between previous and current housing</td>
</tr>
<tr>
<td>.00</td>
</tr>
<tr>
<td>Overall Percentage</td>
</tr>
</tbody>
</table>

a. The cut value is .500
Variables in the Equation

<table>
<thead>
<tr>
<th>Step</th>
<th>Variable</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>Sig.</th>
<th>Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>housing</td>
<td>4.035</td>
<td>1.682</td>
<td>5.752</td>
<td>1</td>
<td>.016</td>
<td>56.540</td>
</tr>
<tr>
<td></td>
<td>accj</td>
<td>-0.376</td>
<td>1.408</td>
<td>0.071</td>
<td>1</td>
<td>.789</td>
<td>0.666</td>
</tr>
<tr>
<td></td>
<td>accs</td>
<td>2.944</td>
<td>1.550</td>
<td>3.610</td>
<td>1</td>
<td>.057</td>
<td>18.995</td>
</tr>
<tr>
<td></td>
<td>social</td>
<td>4.236</td>
<td>1.459</td>
<td>8.426</td>
<td>1</td>
<td>.004</td>
<td>69.114</td>
</tr>
<tr>
<td></td>
<td>Constant</td>
<td>-20.501</td>
<td>7.091</td>
<td>8.359</td>
<td>1</td>
<td>.004</td>
<td>0.000</td>
</tr>
</tbody>
</table>

a. Variable(s) entered on step 1: housing, accj, accs, social.

accj=access to jobs
accs=access to services
social=social asset

(Binary) logistic regression is a statistical technique suited for the analysis of discontinuous or discrete dependent variables. The dependent variable for this logistic regression is the responses of household's preferences between current housing in the resettlement sites and previous housing in slum settlements, and the independent variables are changes in housing, accessibility to jobs, accessibility to services, and social asset. Hosmer and Lemeshow's goodness of fit test shows .682 significance, which implies that this is a well-fitting model. There is no widely-accepted direct analog to ordinary least squares regression's R-square in logistic regression. Nagelkerke's R-Square is a figure varying from 0 to 1 used to measure strength of association between independent and dependent variables. The Nagelkerke's R-Square (in “Model Summary”) for this model shows .701, which is relatively high. This implies that the resettler’s housing preferences are strongly associated with the changes in housing, accessibility to jobs, accessibility to services, and social asset.

Another analysis from this logistic regression is the relative importance of each independent variable in explaining the variances of the dependent variable (i.e. the explanatory power of a given independent variable controlling for other variables in the model). By looking at the B-coefficient estimates (in “Variables in Equation” table), one can see that the change in social asset has the most explanatory power (with B-coefficient of 4.236) amongst the four independent variables significance at .004.

Since the effect of the “accessibility to jobs” variable is not significant, it is instructive to conduct a logistic regression analysis excluding this variable, which is shown below.
## Case Processing Summary

<table>
<thead>
<tr>
<th>Unweighted Cases</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selected Cases</td>
<td>47</td>
<td>78.3</td>
</tr>
<tr>
<td>Missing Cases</td>
<td>13</td>
<td>21.7</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>100.0</td>
</tr>
<tr>
<td>Unselected Cases</td>
<td>0</td>
<td>.0</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*a. If weight is in effect, see classification table for the total number of cases.*

## Model Summary

<table>
<thead>
<tr>
<th>Step</th>
<th>-2 Log likelihood</th>
<th>Cox &amp; Snell R Square</th>
<th>Nagelkerke R Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>29.507*a</td>
<td>.521</td>
<td>.700</td>
</tr>
</tbody>
</table>

*a. Estimation terminated at iteration number 7 because parameter estimates changed by less than .001.*

## Hosmer and Lemeshow Test

<table>
<thead>
<tr>
<th>Step</th>
<th>Chi-square</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3.505</td>
<td>7</td>
<td>.835</td>
</tr>
</tbody>
</table>

## Classification Table

<table>
<thead>
<tr>
<th>Observed</th>
<th>Predicted preference between previous and current housing</th>
<th>Percentage Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>preference</td>
<td></td>
<td></td>
</tr>
<tr>
<td>between</td>
<td></td>
<td></td>
</tr>
<tr>
<td>previous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>current</td>
<td></td>
<td></td>
</tr>
<tr>
<td>housing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*a. The cut value is .500*

## Variables in the Equation

<table>
<thead>
<tr>
<th>Step</th>
<th>housing</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>Sig.</th>
<th>Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>accs</td>
<td>2.761</td>
<td>1.370</td>
<td>4.064</td>
<td>1</td>
<td>.044</td>
<td>15.823</td>
</tr>
<tr>
<td></td>
<td>social</td>
<td>4.131</td>
<td>1.393</td>
<td>8.798</td>
<td>1</td>
<td>.003</td>
<td>62.239</td>
</tr>
<tr>
<td></td>
<td>Constant</td>
<td>-19.666</td>
<td>6.274</td>
<td>9.823</td>
<td>1</td>
<td>.002</td>
<td>.000</td>
</tr>
</tbody>
</table>

*a. Variable(s) entered on step 1: housing, accs, social.*

*accs=access to services*

*social=social asset*
As expected, this model still has high Nagelkerke’s R-Square of .700. From the “Variable in the Equation” table, it still seems to hold that the change in social asset has the strongest explanatory power among the three independent variables.
Appendix 7.
Pearson correlation analysis output for the relationship between social networks and loss/change of jobs.

<table>
<thead>
<tr>
<th>Correlations</th>
<th>social networks</th>
<th>number of those changing or quitting jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>social networks Pearson Correlation</td>
<td>1</td>
<td>-0.399**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.005</td>
</tr>
<tr>
<td>N</td>
<td>48</td>
<td>48</td>
</tr>
<tr>
<td>number of those changing or quitting jobs Pearson Correlation</td>
<td>-0.399**</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.005</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>48</td>
<td>48</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

Appendix 8.
Pearson correlation analysis output for the relationship between change in social networks and change in level of cooperation.

<table>
<thead>
<tr>
<th>Correlations</th>
<th>level of cooperation</th>
<th>social networks</th>
</tr>
</thead>
<tbody>
<tr>
<td>level of cooperation Pearson Correlation</td>
<td>1</td>
<td>.472**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.001</td>
</tr>
<tr>
<td>N</td>
<td>47</td>
<td>47</td>
</tr>
<tr>
<td>social networks Pearson Correlation</td>
<td>.472**</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.001</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>47</td>
<td>48</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).
**Appendix 9.**
Pearson correlation analysis output for the relationship between change in number of earning members and change in self-declared household income.

<table>
<thead>
<tr>
<th></th>
<th>self-declared household income change</th>
<th>change in number of earning members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>.612**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>48</td>
<td>48</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

**Appendix 10.**
Pearson correlation analysis output for the relationship between prospect of future income and change in travel expense for commuting.

<table>
<thead>
<tr>
<th></th>
<th>change in travel expense for commuting</th>
<th>prospect of future income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>.436**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.009</td>
</tr>
<tr>
<td>N</td>
<td>48</td>
<td>35</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).
Appendix 11.

Pearson correlation analysis output for the relationship between prospect of future income and change in level of cooperation.

<table>
<thead>
<tr>
<th></th>
<th>prospect of future income</th>
<th>level of cooperation</th>
</tr>
</thead>
<tbody>
<tr>
<td>prospect of future income</td>
<td>Pearson Correlation</td>
<td>.377*</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.028</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>35</td>
</tr>
<tr>
<td>level of cooperation</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.028</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>34</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed).
Appendix 12.

Pearson correlation analysis output for the relationship between quality of water supply and health.

<table>
<thead>
<tr>
<th></th>
<th>health</th>
<th>water</th>
</tr>
</thead>
<tbody>
<tr>
<td>health Pearson Correlation</td>
<td>1</td>
<td>.315*</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.029</td>
</tr>
<tr>
<td>N</td>
<td>48</td>
<td>48</td>
</tr>
<tr>
<td>water Pearson Correlation</td>
<td>.315*</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.029</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>48</td>
<td>48</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed).