

MSc. Thesis

SLUM REHAB FLATS: A HAPPY LIVING FOR THE LUCKY FEW

The subjective well-being of rehabilitated residents and the impact of the slum rehabilitation scheme in Mumbai, India.



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Abstract

This research provides a balanced and thorough approach to assessing the slum rehabilitation scheme (SRS) in Mumbai, by taking the subjective well-being as a central parameter. The work presents quantitative and qualitative data that was collected over a period of four months in two communities in Mumbai in early 2013. A total of 94 structured questionnaires was conducted under slum residents, people living in transit camps and rehabilitated residents. This study compares the levels of satisfaction with life of the slum residents and the rehabilitated residents to indicate the experienced changes in well-being, either positively or negatively. The domains of housing satisfaction, community satisfaction and discretionary income are expected to be impacted by the SRS and through this impact the well-being. These levels of these domains were measured and correlation with satisfaction with life was analyzed accordingly. This paper found rehabilitated residents to have a higher satisfaction with life, in case they get rehabilitated correctly. Many slum residents face hardships induced by irregularities in the scheme affecting their well-being negatively.

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List of abbreviations

FSI	Floor Space Index
INR	Indian rupee
PPP	Public Private Partnerships
SRA	Slum Rehabilitation Authority
SRS	Slum Rehabilitation Scheme
SWL	Satisfaction With Life
SWLS	Satisfaction With Life Scale
TDR	Transferable Development Rights
ULCA	Urban Land Ceiling Act

1. Introduction

Near the end of 2011, the human population reached a staggering seven billion people (UNFPA 2011). The population of urban areas has also grown significantly in comparison to rural areas (ibid.). Forecasts are that population will keep increasing until approximately 2050. The inability of governments to keep up with the rapid pace of urbanization and provide affordable housing has led to an increase in the number of slums. Already one third of the urban world population is living in slums and squatter settlements (Ooi and Phua 2007, 29). Estimates suggest that there will be two billion informal settlers worldwide by 2030 (United Nations 2003, 18). It is a priority for local governments to improve housing conditions in slums as slums are being associated with poverty (Restrepo Cadavid 2010). Approaches have shifted from neglect and eviction to upgrading, redevelopment and rehabilitation (United Nations 2003, 27). Success stories have been meagerly documented, resulting in a need for systematic impact analysis of slum upgrading and rehabilitation practices (ibid.). This research is an attempt to carefully outline the impacts of slum rehabilitation practices in Mumbai (India) on the well-being of the residents.

Mumbai, with its estimated 10 to 12 million informal settlers, has the dubious reputation of being the global capital of slum dwelling (Jain 2010; Davis 2007). Mumbai's Slum Rehabilitation Authority (SRA) currently operates the slum redevelopment scheme (SRS) which facilitates slum rehabilitation and is a clear-cut example of a public private partnership. The SRS allows private developers to bid for redevelopment projects of land where informal settlers reside. In exchange for relocating informal settlers in purpose-built, *insitu* (on the original plot) multi-storey residential buildings, the developer is allowed to use the space left vacant to build apartments, offices, hotels or other commercial buildings for the private market. This is profitable because of Mumbai's high land prices (Nijman 2008). The SRS is currently being implemented across the city and will have a profound impact on the lives of millions of people. Strong support and opposition to the SRS coexist within the slum community itself; some have formed committees to press for eligibility of their slum under the scheme and lauded its benefits, whilst others decry the poor quality of the new buildings, high maintenance fees, irregularities and difficulties when it comes to obtaining formal tenure documents after they have moved in.

Literature suggests that improvements in housing conditions are expected to lead to a higher satisfaction with life (Bookwalter and Dalenberg 2004, 343). However, it is debatable whether the benefits of living in these rehab flats outweigh those of living in a slum. In the last years various construction scams were discovered in Mumbai, and corruption has led to construction of unsafe spaces on many occasions (Vyas 2012). Furthermore, the houses are assigned based on a lottery system, which leads to the uprooting of communities established

over decades. At the same time it has been argued that rehabilitation has a negative economic impact on the households because it changes the economic environment by formalizing the neighborhood. This study explores the impact of the rehabilitation scheme by presenting analysis of data that was collected during four months of fieldwork in Mumbai in 2013.

The prevailing scholarly approach to the SRS had a policy and community organizational focus, providing us with a picture of a highly controversial and exclusive scheme (i.e. Anand and Rademacher 2011). Doshi's (2012) ethnographic study of dispossession and demolition that took place under the SRS provides the reader with insight in the political practices to battle these irregularities. Anand and Rademacher found that many slum residents who are eligible or might be eligible for rehabilitation in the future aspire to SRA housing (ibid.). It has been demonstrated that the SRS coexists with practices of eviction, suggesting that rehabilitation only reaches a selective group. Further, Nijman (2008) concluded that the neo liberal approach to housing is unlikely to be conducive to alarge scale success. However, little is known about the impact of the rehabilitation on the lives of the participants in the SRS while thousands of households have been rehabilitated and more are await (Sheth et al. 2009). Conventional impact assessments typically evaluate slum upgrading and rehabilitations programs in terms of size, the built-up area, the Floor Space Index consumed, the financial turnover, physical attributes, and various other business and marketing merits (Das 2005). These measurements are proxies and are based on assumptions on what enables people to live a satisfying life. To gain insight in the lived experience of slum rehabilitation this study follows the body of literature on subjective well-being (i.e. Diener 2009) by taking subjective well-being as a parameter for living conditions. Using subjective well-being as a metric allows for impact analysis based on the participants' understandings of happiness. It also gives fair insights as people are considered to be good judges of their well-being (Stutzer and Frey 2010). Thereby it complements merely objective evaluations. The data for this research were collected in Mumbai in the course of four months in early in 2013. This study measures well-being levels of slum residents and rehabilitated residents and compares the results to give insights on the effect the SRS has on the well-being of the participants. Furthermore, this study distinguishes domain specific satisfaction indicators (housing satisfaction, community satisfaction and discretionary income) to identify through which domains slum rehabilitation impacts the well-being of its participants, either positively or negatively. By examining the domains of housing satisfaction, community satisfaction and discretionary income, this study will bring together different approaches to analyzing the SRS and provide the reader with a wider overview of the impacts of the scheme on its participants.

The thesis is organized as follows. Chapter 2 gives an overview of Mumbai's housing problems, discussing slums and slum upgrading strategies. Chapter 3 presents a well-being framework used to analyze and present the empirical work on slum rehabilitation and further include the hypotheses. Chapter 4 describes the methods used to gather the data. Chapter 5 is a description of the study area. Chapter 6 presents results and discusses the effects of rehabilitation on the well-being of the participants in the scheme. Section 7 evaluates the SRS in a broader perspective. Chapter 8 concludes.

2. Mumbai's challenge: housing its millions

Mumbai is a city in transition; shifting to economies of trade, tourism and finance (Appadurai 2000; Pacione 2006). The city attracts more migrants with its wealth, glamour and power than she can absorb. This led to appreciation of housing prices leaving house ownership impossible for the majority of the Mumbaikers. The resulting overcrowding, increase in informal settlements and the government's attempts to reduce the number of slums will be discussed in this chapter.

2.1 Slum formation

Mumbai has been rapidly growing for over a century, increasing its population from 0.9 million in 1901 to a staggering estimated 18.4 million in 2011 (Pacione 2006: Census 2011). The high rate of population growth was and is caused by rural-urban migration; the city's work opportunities attract many people from the rural areas and subsidized transport systems make it cheap to undertake the journey (O'Hare et al. 1998; Sheth et al. 2009). Mumbai's exceptional topography, as a city located on a peninsula, created constraints on the land supply (Bertaud 2011). Historically, Mumbai does not have a tradition of investment in public housing. Therefore, the number of informal settlements could increase as the city's governments and private builders were not able to keep up with the rapid pace of its demographic growth by planning for and providing affordable housing (Pacione 2006). This resulted in a shortage of formal low-income housing. City planners and politicians were hoping that the sprawling slums would be a problem of temporarily nature, however it was not (Gruber et al. 2005). "The city of the slums may not be intended, but is likely to be indispensable" (Nijman 2010,14). It was in the 1970's when slums began to proliferate (Sheth et al. 2009). Dystopic urbanization took place on a faster pace than economic growth did, jobs became harder to find, while economic refugees kept arriving, leading to an increase in slums (Appadurai, 2000; Shetty 2007). Subsequently, slums became an inevitable part of Mumbai's history and present (Anand and Rademacher 2011). Mumbai is India's largest and poorest metropolis at the same time (Pacione 2006). The huge inequality is ubiquitous in this city. Increasing urban poverty, inequality and insecure land tenure contributed further to the formation of slums (Gruber et al.2005).

Slums are considered to be a major issue in Mumbai; particularly problems related to transportation, population, health and safety (Sheth et al. 2009). Currently, an estimated 60 percent of Mumbai's population lives in slums and occupies 6 percent of the city's land (CBC 2007). Many citizens simply cannot afford housing against the real estate prices that have been dominating the housing market (O'Hare et al. 1998). In the last four years prices in Mumbai

increased on average by 66 percent, which is the highest among all Indian cities. This increase has been blamed on the limited supply on clear land and high interest rates (The Economic Times 2013). The present formal housing market in Mumbai does not meet the needs of the low-income households. Due to this gap in the market vertical integration exists between the traditional housing market and the informal housing market (Restrepo Cadavid 2010). The importance of the informal market should not be underestimated as estimations suggest that only 5-6 percent of the households can afford a house in Mumbai, taking into account the present income distribution and institutional rates (Gandhi 2012). Given these rates the authorities can no longer ignore the informal homegrown habitats.

2.2 A history of urban upgrading

Back in 1896 Mumbai's authorities were given the power to clear slums through the Improvement Trust Act (O'Hare et al. 1998; Sheth et al. 2009). Albeit the first post-independence policy on slums in Mumbai was based on the idea that slum residents should be rehoused in permanent structure. Permanent structures were not provided and demolition continued unabated (Das 2005). However, the informal settlement persisted to be part of the city.

In the 1970's the rural urban migration soared to new heights and so did the formation of slums. The Mumbai government's capability to clear slums could not keep up with the rate at which they were being created. This led the state government to introduce the Maharashtra Slum Areas Improvement, Clearance and Redevelopment Act of 1971, which was followed by the Slum Improvement Program (1972) (Chatterji 2005). The focus shifted from slum clearance to service provision of water supply, toilets, roads, drainage and streetlights in slum areas (Das 2005). An ambitious top-down plan, but unfortunately three million slum residents never received any of these service improvements. A project evaluation found that the per capita investment norms and the suggested scale of service provision were unrealistic (Das 2005; Chatterji 2005).

In 1976 the central government introduced the Urban Land Ceiling Act (ULCA). The intention of ULCA is to redistribute more land to the poor. In 1985, the government of Maharashtra (the state government), following the new direction of ULCA, launched the Slum Upgrading Program in collaboration with the World Bank. Under this scheme the Brihanmumbai Municipality Cooperation had to deliver to some basic amenities. Hence, slum co-operatives were envisaged to upgrade their dwellings themselves in exchange for housing loans and transfer of land tenure. Under pressure of private developers the government lacked

commitment to transfer the land tenure to the slum cooperatives and their residents; only 22 thousand households got land tenure in the eight years the program was in function. The high interest rates slum dwellers had to pay on the loans added to the programs failure (Nijman 2008; Das 2005).

Seen through the new policy paradigm cities were generators of wealth. Therefore, the government needed to invest in order to develop and achieve economic growth: service provision, community action (1980's) and privatization (1990's) became the new trend (O'Hare et al. 1998). These trends of community action in the 1980's and privatization in the 1990's fit very well in the dominant international development discourses, provoked by international agencies, such as the World Bank at that time. Moreover, the failure of public investment in housing and the emergence of India as a market-oriented economy in the 1990's further encouraged housing initiatives in collaboration with the private market (Nijman 2008). The first of such a market oriented housing provision scheme was the Slum Redevelopment Scheme of 1991. The scheme was built on the new belief in public private partnership but was a non-starter from the beginning (Das 2005). The plan did not include transit accommodation and the builders did not get enough incentives to participate. Consequently, the scheme could count on skepticism from both builders and slum residents, who did not want to give up possession of their plots in absence of transit accommodation. Regardless of the failure of the Slum Redevelopment Scheme the authorities continued along the line of Public Private Partnerships (PPP) and in 1995 the Slum Rehabilitation Scheme was announced with a lot of grandeur; promising free houses to four million slum dwellers (Das 2005).

2.3 SRS: Public private partnership for a slum free city

The local governments faced financial constraints to provide houses and could not keep up the production scale with the rising demand for houses. It was in 1994 when the National Housing Policy marked the transition towards a bigger role for the private sector in housing delivery. Further, it emphasized the government's legal role to create an institutional framework for housing markets by eliminating regulatory constraints and supporting appropriate infrastructure investments (Sengupta 2006; Banerjee-Guha 2002). This 'enabling approach' led to a shift for physical construction on-to the market in the form of partnership arrangements between government agencies, private builders and community organizations (Sengupta 2006; Nijman 2008).

Although PPP has a long tradition in developed countries, PPP's are still emerging in developing countries. So far the outcomes of the housing reforms in India have varied as the regulations on land, housing and PPP's are designed at the state level (Sengupta 2006). The main argument for providing housing through a partnership instead of through the sole private sector is that it makes housing more affordable and financially accessible to the poor. In the case of Maharashtra, the state in which Mumbai is located, the partnership in place is the SRS with a focus of housing provision through the private sector rather than through community organization (as is in example visible under the Rajiv AwasYojana scheme¹). However the affordability of SRA flats has been questioned (Restrepo Candavid 2010; Bhide et al. 2003). Yet in supply terms, the 15 thousand houses that have been built under the scheme are a fraction of the targeted four million (Weinstein 2008; Suresh et al. 2013).

2.3.1 SRS: development incentives

The SRS illustrates the emergence of a liberalized housing market, relatively free from government intervention but with social housing characteristics (Nijman 2008). Builders became the instrument that had to release the city from its slums. The profitability of the SRS for the builders depends on high property rates. Furthermore, the SRS includes cross-subsidizing incentive mechanisms to encourage private developers to participate in the scheme and rehabilitate or resettle the slum communities: the Floor Space Index(FSI) and Transferable Development Rights(TDR's) and a free sale component (Maharashtra Slum Areas Act 1971).

FSI is a term for the ratio of a building's total floor area to the plot area². Thus, a FSI of 2 indicates that the floor area of the building is two times the gross area of the plot on which it is constructed. In Mumbai the permitted FSI is 1.33 for the Island City (the city center) and 1.00 for the Suburbs with Bandra-Kurla and Dharavi being an exception with 4.00 FSI (Bertaud 2011). These maximum FSIs are exceptionally low compared to other low and middle income countries (Annez et al. 2010). The SRS intend to use land as a financial resource for the local authorities by offering additional FSI with a maximum of 2.5 (depending on the number of rehabilitated slum residents) to builders who rehabilitated slums or reconstructed rent controlled dilapidated buildings (Banerjee-Guha 2002; Bertaud 2011; Sheth et al. 2009). Moreover, a higher FSI results in a higher bonus, developers are encouraged to build skyscrapers as a solution to Mumbai's land scarcity. The space that is gained by building skyscrapers can be used to construct apartments for sale, through which the developers will be able to make a profit.

¹The Rajiv AwasYojana scheme

²FSI = gross floor area/area of the plot

The TDR, granted and formalized by the issue of a Development Right Certificate, is a mechanism to finance public investments, such as housing and infrastructure (Bertaud 2011). TDR allow landowners to transfer development rights to other locations if the area is too dense to get a satisfactory sales component (Banerjee-Guha 2002). Moreover, TDR is a construction in which the rights of reserved government land can be transferred to private developers, by way of a subsidy for their participation in slum developments schemes (Chatterji, 2005; Banerjee-Guha 2002). Under TDR transactions, developers are granted proportionate property development rights northward of the plot and additional FSI. The developed plot can be sold on the market, which creates a financial incentive to participate in the SRS (Bertaud 2011).

2.3.2 SRS: issues of consensus and eligibility

All housing structures that can be proven to have existed on or before 1st of January 1995 are eligible for rehabilitation. All eligible structures are provided with a new 225 square feet house in the constructed SRA flats, regardless of the size of their slum structure (Sheth et al. 2009; Patel 1996). Flats are allotted based on a lottery system. The flat is assigned for a minimum period of ten years during which it is illegal to sell the flat and the builder is obligated to pay the maintenance fee (Maharashtra Slum Areas Act 1971). Slum residents who are ineligible for resettlement - renters, recent migrants and those without documents - have to find themselves a form of shelter elsewhere in the city (Patel and Arputham 2007). This leads to a substantial number of displaced people under the SRA projects (Suresh et al. 2013).

To implement the rehabilitation a consent of 70 percent of the eligible slum residents of the existing society should be raised (Maharashtra Slum Areas Act 1971). The housing societies can press for rehabilitation after raising the consent or a developer shows interest in the redevelopment and raises the consent. The housing societies play a vital role in this process as they often try to negotiate the conditions under which the rehabilitation takes place (Anand and Rademacher 2011). Once the project is approved by the SRA slum residents are relocated in transit camps until the new buildings are constructed (Restrepo Candavid 2010).

2.3.3 SRS: fraud and irregularities

The SRA scheme has been plagued by many cases of fraud. One of the leading newspapers wrote “Corrupt practices and inept institutions continue to deny stable housing, access to sanitation and quality of life to a large number of slum dwellers” (The Hindu 2012). Though this paper does not seek to focus on illegal practices it should be noted that the way the scheme is

implemented across the city has implications for participants' well-being. For instance, the irregularities might result in displacement due to unannounced demolition and lack of adequate transit accommodation. Irregularities recorded across the city are: fraudulent consent, arbitrary merges of schemes, uninhabitable transit camps, intimidation of residents, complacency of SRA officials with developers and police support to the nexus of promoters-politicians-developers (Suresh et al. 2013; Weinstein 2008). Irregularities and fraud will be further examined in Chapter 5 as a part of the locality description.

3. Well-being as a measure for success

This section lays down the framework this paper relies on to analyze the impact slum rehabilitation has on the subjective well-being of the participants.

3.1 Literature review

“Happiness is considered to be the highest good and the ultimate motivation for human action.”
– (Diener 2009, 11)

3.1.1 Well-being: a useful concept

Standard economic theory uses utility to assess individual welfare levels. The concept of utility is based on the assumption that satisfaction is provided through goods and services (Greeley, 1994). Welfare judgments are made by restoring to the Pareto criterion and not by the subjective experiences captured by surveys (Stutzer and Frey 2010). Often utility is operationalized in terms of income, leading to the belief that economic growth will result in an increase in welfare (Greeley 1994). The measurement of welfare through income has been criticized for the obvious reason that it is only focused on one aspect of life and fails to capture other important aspects of welfare (Graham 2005; Greeley 1994). Numerous scholars have challenged this standard rational approach to economics by incorporating subjective measures in their welfare studies (Stutzer and Frey 2010; Graham 2005). One of the new ways to approach individual welfare is to include satisfaction. Subjective well-being is the umbrella term for the field of measures that include the subjective experiences. Subjective well-being has been defined by Shin and Johnson (1978) as “the global assessment of a person’s quality of life according to his own chosen criteria” (ibid., 478). This makes that subjective well-being is not concerned with one’s objective conditions; rather the well-being resides within the experience of the individual (ibid.). In this way the subjective-wellbeing approach essentially differs from the usually followed doctrinal approaches (Rojas 2004). Doctrinal approaches are normative in their study in what leads to a good life. The inferential approach is beneficial when assessing policies that aim to improve quality of life; it provides us with a lens to analyze what leads people to evaluate their lives positively and negatively (Diener 2009). Moreover, measures of subjective well-being allow us to unravel the relationship between individual well-being and objective conditions, such as income, inequality, education and housing (Stutzer and Frey 2010; McBride 2001). The main concern with subjective well-being measures is measurement errors as self-report has higher chances to be

influenced by the immediate context. However, the idiosyncratic effects are expected to cancel each out and should not lead to a systematic bias (Stutzer and Frey 2010).

3.1.2 Well-being: what makes us happy?

The body of well-being literature is built around the domain-of-life approach, which is the theorization of the idea that life satisfaction can be understood as the aggregated concept of satisfaction in the domains of life (Praag et al. 2003). Adopting a domain-of-life approach this study understands the satisfaction with life as a whole on the basis of a multidimensional vector of specified satisfactions in more concrete domains of life. The list of domain satisfactions can go from a small number to long lists examining lots of human activities in relation to life satisfaction. The existence of a causal relationship between domain satisfactions and general satisfaction has been generally accepted. However, there has been some debates regarding the nature of the causality; does general satisfaction explain domain specific satisfaction or does domain specific satisfaction explain a persons general satisfaction (Rojas 2004).

A study of Campell (1988) found the following domain satisfactions to correlate life satisfaction: the self, standards of living, family, work, income, health and community. Notwithstanding, several studies have found that satisfaction in the domain of family is crucial for life satisfaction in developing countries (Rojas 2004; Campell 1988 and Cox 2012). Secondly, the economic domains of life were found to strongly correlate to well-being (Biwas-Diener and Diener 2011; Cox 2012; Rojas 2004). The economic domain refers to satisfaction in areas of life such as housing and living conditions, food, financial solvency and income. This is in line with the findings of Canfield, Choudhury and Devine (2009), who studied well-being of the poor in Bangladesh and found that material needs and social relationships are both important contributors to well-being. Surprisingly, community satisfaction was not related to life satisfaction according to Rojas (2004). Looking at relevant demographics it was found that economically poor people tend to have a lower life satisfaction (ibid.).

3.2 Well-being and slum rehabilitation

To assess the change of quality of life of SRS participants, subjective well-being is taken as a parameter, referred henceforth as well-being. By using objective measurement we can gain insight in housing attributes, but this does not allow us to understand the lived experience of individuals, households and neighborhoods. Assessing overall well-being broadens the evaluations' scope and enhances the insights in overall performance of the SRS (Veenhoven

2002). In this study two housing types are distinguished for: i) slum and *chawl*³ houses and ii) SRA flats.

Living in a slum has considerable impact on quality of life (Sheth et al. 2009). Slum rehabilitation is supposed to change these living conditions (captured by the housing domain), yet it has been argued that rehabilitation might cause negative changes in the community and economic sphere (Bhide et al 2003). I identified three main well-being domains related to the SRS in the areas that are central to the SRS effectiveness debate: housing satisfaction, community satisfaction and discretionary income. Using this framework to analyze my data it aims to provide insight in the direction and magnitude of the changes within these three domains.

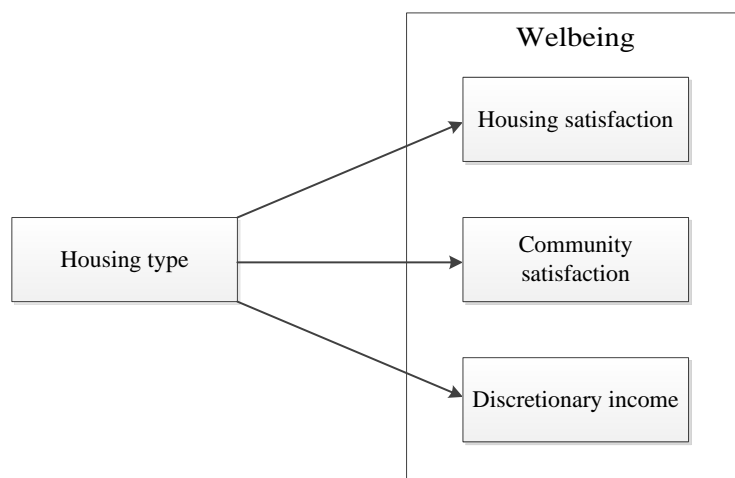


Figure 1: theoretical framework

3.2.1 Housing satisfaction

Scarcity of land defines life of the urban poor, resulting in crowded settlements when poorly managed by the government. In rural areas the quality of land is the most important value whereas in urban areas this is location. “Access to secure land and shelter in locations which facilitate access to employment opportunities, services and public amenities is a precondition for survival, not just success, in urban areas.” (Payne 2002, 151).

Housing satisfaction has been positively associated with well-being (Cox 2012; BiwasDiener and Diener 2001). A study of Bookwalter and Dalenberg (2002) on subjective well-being and household factors in South Africa found that housing and transportation are the strongest determinants of the well-being of the poor. Housing has a strong impact on

³Initially *chawls* were compact modules of village homes. They can consist of several stories. A *chawl* home typically consist of single room tenement with a kitchenette. The dwellings usually face a shared courtyard (Rane and Barde 2012)

satisfaction at the lowest income levels. Upgrading from shack to hut and hut to apartment leads to a higher experienced well-being. Ownership of the house was also found to have a positive impact on well-being (ibid.). Furthermore, objective housing quality is positively and significantly correlated with housing satisfaction (Biwas-Diener and Diener 2001).

3.2.2 Community satisfaction

Community satisfaction measures the feelings of the residents towards their community including community bond, relationships with neighbors and social support. The informal settlements tend to have structures that are similar to those of a village, which allows for interaction between the residents. Changes in community satisfaction are related to well-being, as human beings are essentially social. Along these lines Bradburn (1969) found that changes in frequency of social contact was positively associated with well-being. Furthermore, Biswas-Diener and Diener (2001) stated that satisfaction with life in the slums of Calcutta was not merely associated with material domains of satisfaction but was rather found in social domains.

3.2.3 Discretionary income

Monetary income is highly important for survival in an urban setting (Rakoldi and Jones 2002, 11). In urban settings there is a lot of hidden poverty as the costs attached to living in a city are generally higher than in rural areas while poverty measurements do not sufficiently distinguish for these costs. It is estimated that the urban poor typically spent 20 to 33 percent of their income on housing (often just a single room), while 5 to 15 percent of their income is spent on commuting to work and another 10 to 20 percent of the income is spent on buying water from water *wallahs*⁴ and using public toilets (Mitlin and Satterthwaite 2004, 9).

Higher income and poverty reduction are stated as a benefit of slum upgrading (Restrepo Candavid 2010, 2). Moreover, income has consistently been found to positively correlate with well-being (Diener 2009; Frey 2008). Especially for the lowest economic groups an increase in income can have large effects on well-being. Maslow (1954) developed the basic needs theory stating that basic needs should be fulfilled before one can attain self-actualization. Maslow's idea has been further theorized by Veenhoven (1991) by arguing that income has the largest effects on subjective well-being for those at the lowest economic levels as it increases their ability to fulfill basic needs such as food, water and shelter (Biwas-Diener and Diener 2001). The relationship is one of decreasing marginal returns; once one is beyond the level of basic need

⁴A *wallah* is a person involved or employed in a particular activity, so in this case it means water seller.

fulfillment an extra unit of income will only result in a small amount of additional happiness (ibid.).

In this study I look at discretionary income, which is the total income minus taxes and the payments necessary to meet current bills. The bills that are accounted for are housing costs consisting of utility costs and maintenance cost. Resultantly, we can compare the differences in income that the household can actually spend after accounting for these costs. This allows for a broad evaluation of changes in the economy of the households after rehabilitation.

3.3Hypotheses

The slum rehabilitation program, as is stated by the SRA, is meant to increase living standards through housing: “It is imperative to enhance their standard of living and for which an authorized dwelling unit is a first step in the right direction.” (Slum Rehabilitation Authority 2012). Based on the objective of improving housing quality, one would expect SRS to lead to increases with housing satisfaction. This leads to the following hypothesis.

Hypothesis 1: Rehabilitated residents have a higher housing satisfaction compared to slum residents.

Public private partnerships, on which the SRS relies, provoke the rise of multi-storey buildings and gated communities (Doshi2013).This is fundamentally different from the community structures in Mumbai’s slums and *chawls*, which evolve around the concepts of sharing and living together (Rane and Barde 2012).Therefore, the change in the neighborhood assets from an open to a gated community is expected to impact the community satisfaction. Further, rehabilitation increases the population density in places that are already extremely densely populated (Nijman 2008).Moreover, the houses are assigned based on allotment, creating new communities and uprooting communities established over decades. Based on Takeuchi et al. (2008) changes in the neighborhood composition are likely to be welfare reducing. From this follows hypothesis two.

Hypothesis 2: Rehabilitated residents have a lower community satisfaction compared to slum residents.

It has been argued that slum residents cannot afford the maintenance costs of their new flats, resulting in 10 percent to 30 percent of rehabilitated residents moving out of the flats (Restrepo Cadavid 2010; Bhide et al. 2003). It is also important to consider whether rehabilitated residents face only an increase in housing costs or if they also experience changes in income. The economic impact of the slum rehabilitation is particularly interesting as views on the impact in

income differ. Some researchers have found that slum rehabilitation can lead to higher incomes (Restrepo Cadavid 2010, 4). That said, with the slums being intertwined with the informal sector, slum rehabilitation may inhibit access to the informal sector and destroy income possibilities of the urban poor. With mills and industries having closed down, the informal economy has seen tremendous growth and has been a significant source of employment for the urban poor (Bhide 2009), which I expect to lead to lower incomes. Based on this hypotheses 3 and 4 have been formulated

Hypothesis 3: Rehabilitated residents have a lower average income compared to slum residents.

Hypothesis 4: Rehabilitated residents face significantly higher housing costs compared to slum residents.

The overall effect on satisfaction with life is expected to be positive therefore I expect the positive impact of housing satisfaction to outweigh the negative impacts on community satisfaction and discretionary income.

Central hypothesis: Rehabilitated residents have a higher satisfaction with life compared to slum residents.

4. Data and methods

This chapter provides a general description of the methodological approach adopted for my research. This study uses primary data collected from the field and secondary information gathered from a non-governmental organization.

4.1 Research design

This study has a design that combines quantitative and qualitative research approaches. To be able to interpret my data I held semi structured interviews and observed the processes happening in the communities. Using such a mixed method is necessary when one tries to measure a truly 'hybrid' concept as wellbeing. "There is no alternative but to combine measurements with assessments of what the measures mean to the people being measured." (Wilk 1999, 93).

When one is interested in the change in well-being of the participants over time one could benefit from a longitudinal study. However, limited time rendered a longitudinal study unfeasible. To deal with the so called memory-bias of people and to improve the internal validity of the study I surveyed slum residents who are eligible for rehabilitation, people who stay in transit accommodation in anticipation of their new house and participants in the scheme who already have been rehabilitated. I assumed that eligible slum residents who still stay in their original settlements have a life satisfaction that is comparable with the levels of life satisfaction of the rehabilitated residents prior to rehabilitation. Based on this assumption I took the slum residents levels of overall life and domain satisfactions as the baseline level that I compared with the levels of overall and domain satisfactions of rehabilitated residents. Using this method enabled me to measure the changes in well-being levels induced by the rehabilitation. By measuring domain specific satisfaction levels this study also explains the presence or absence of a casual relationship between participation in the slum rehabilitation scheme and the individual well-being levels through specific pathways. The domain variables were chosen based on the literature, as presented in Chapter 3. The people who stayed in transit accommodation were included in this study to provide the reader with insights in how the transition period, which often takes years, is experienced.

The building process of the SRA flats is often slow moving. Resultantly, communities do not get rehabilitated at once. Often the pace of rehabilitation depends on the willingness of the people residing in the area to move to the flats, a process that gets delayed when people protest. Protests to stop the rehabilitation process, or conversely, to speed up slow rehabilitation processes can be found in many settlements in Mumbai (Sheth et al. 2009). Especially, in areas with big plots (and this is where the SRS is implemented, as this is where developers can make

most profits) all stages of the scheme can be found. These delays and protests also took place in the localities where I gathered my data. Noticing that the neighboring communities get rehabilitated considerably faster might influence the participant's opinion on the scheme negatively and therefore can have influenced my results. Moreover, the SRS co-exists with demolition, which also happened in the selected localities. Off course, this did affect the residents emotionally and probably induced bias to my results. Moreover, it also provided me with insights on how the incorrect implementation of the SRS affects slum residents, which is discussed more extensively in Chapter 7. Finally, I would like to highlight once again that this situation is not unique in Mumbai and that many slum residents live under similar circumstances.

4.2 Sampling

In an effort to get a relatively representative sample, a judgment sampling method was used for collecting the data for the control group, the slum residents. This was done for practical reasons, because sampling based on family name or house numbers is not viable in these areas as women and elderly people are more often at home. In an attempt to avoid overrepresentation of women and elderly people, I specifically targeted men and younger households. The data was also collected in a way to obtain generational representation. I approached people within the age group of twenty to thirty five, as they were at first underrepresented in my sample. For the data collection in the SRA buildings, permission of the housing committee was needed as those communities were gated. Two buildings, one on each research site, agreed to participate, leaving the research assistant and me with complete freedom to ask residents whether they wanted to participate in the study or not. All households were personally requested to participate. We asked seventy-eight rehabilitated households to participate in the study of which fifty households agreed to cooperate. Reasons to refuse participation in the study were shortage of time and anxiety that the authorities would find out that they illegally sub rent rooms. In total ninety-four households were interviewed; fifty rehabilitated residents, thirty-three slum residents and eleven transit camp residents.

The interviews were done on a voluntary basis. The interviews of the rehabilitated residents were conducted at their homes. The interviews with slum and *chawl* residents were mostly conducted at the open space in front of the houses as many of the houses had been (partially) demolished. The interviews usually lasted for 45 minutes to an hour, in which the structured questionnaire was filled out and a topic list regarding well-being and the rehabilitation scheme was discussed in an open interview style to complement the quantitative data.

4.3 Methods of data collection

My research instruments were designed after a month of exploratory research. During this explanatory phase I spoke to housing activists, community leaders, and residents of slums and transit camps. I witnessed the result of a demolition and spoke to people who were outraged by the scheme. Yet, meeting rehabilitated residents was much harder than I thought at first, as the guards did not allow me to enter the buildings. I met some of them when they were having *chai* (tea) at their family's house in the slum. One of the activists I spoke to used to live in one of the SRA flats and he could provide me with useful insights. Based on the notes on meeting, observations, photographs and newspaper articles I developed a structured questionnaire and semi-structured interview list.

To check if the questions of the structured questionnaire were understood well, I held a pilot session in which 3 questionnaires were filled in and the participants were asked for their feedback in an open discussion. It was during this open discussion that residents expressed their negative feelings towards the SRS and requested me to listen to their opinions and stories of eviction. Although I planned on in-depth interviews in the later stages of my research I decided to supplement all structured questionnaires with a semi-structured interview.

4.3.1 Structured questionnaire

The survey consisted of four parts (see appendix I). The first part of the questionnaire consisted of demographic questions, including: age, gender, education level, English language proficiency and how long they have lived in the community where they currently stay. These data would help to determine which factors might influence the respondents' well-being score.

In the second part the subjective well-being of the respondent was measured using the satisfaction with life scale (SWLS); a short measure of global judgments of satisfaction with one's life (Diener, Emmons, Larsen and Griffin, 1985). The SWLS is a multi-item scale allowing for variance due to specific wording and is therefore more reliable than the available single item scales (Diener 2009). The SWLS asks respondents to make a cognitive assessment of their overall life satisfaction by using a 1 to 7 rating to indicate how much they agree with the presented statement (Biswas-Diener and Diener 2001)⁵. The SWLS consists of the following five statements:

- In most ways my life is close to my ideal
- The conditions of my life are excellent.

⁵1 =strongly disagree; 2 = disagree; 3 = slightly disagree; 4 – neither agree nor disagree; 5 = slightly agree; 6 = agree; 7 = strongly agree.

- I am satisfied with my life.
- So far I have gotten the important things I want in life.
- If I could live my life over, I would change almost nothing.

According to Diener et al. (1985) the SWLS is found to have a good internal consistency (Cronboach's alpha 0.87) and test-and re-test (0.82) over a two month period, making it a reliable instrument.

The third part of the structured questionnaire concerned housing and housing satisfaction and community satisfaction. Facilities in the house and neighborhood were measured by the availability of various housing assets. Housing satisfaction and community satisfaction has been measured on a 1-10 *Likert* scale, as these items were taken from the existing Living Standard Measurement Surveys of the World Bank, which proved to be a reliable instrument when adjusted to the local circumstances. Further, residents were asked about perceived changes in their living conditions.

The fourth part of the structured questionnaire consisted of livelihood measurements. The themes covered were: income levels, livelihood activities, expenditure patterns and access to social capital. This part was entirely based on the Living Standard Measurement Survey as well.

4.3.2 Semi-structured interviews

Semi structured interviews can be defined as pseudo conversations that usually have set topics. In this case the interviews were regarding the following topics: the most positive and negative change and or experience due to rehabilitation, community bond, experienced changes in the neighborhood, aspects of happiness regarding the house, construction of the dwelling, maintenance fees and other rehabilitation program induced costs and the phenomenon of renting out SRA houses (see appendix II).

4.3.3 Observations

During my fieldwork period I did several observations regarding the SRS. I attended and observed important events such as: a demolition, a meeting with the National Alliance of People's Movement, a hunger strike, moving process to the transit accommodation, community gatherings and a housing committee meeting. Furthermore, I was able to enter the construction side to see how the SRA flats were build.

4.4 Data analysis

The quantitative data was first entered into Excel, after data cleansing to check for inconsistencies, and then exported to SPSS. In the analyses I combined the data of Golibar and

Siddarth Colony, because the combined data set enhanced the validity due to the larger number of respondents. I performed a test to check for internal consistency (Chronbach's alpha). Cross-tabulations were used to generate descriptive statistics. Independent sample t-tests were carried out for the domain satisfactions. A chi-square tests was performed to measure the significance of differences in interaction with the neighbors as this variable has a non-parametric nature, following from its nominal measurement. Furthermore, partial correlation analysis was performed to measure the degree of association between well-being and the domain variables: housing satisfaction, community satisfaction and discretionary income.

The qualitative data were manually noted in the field diary. The information obtained from the described observations were written down or photographed. At first, the plan was to tape all interviews, but after I discovered that people were hesitant to participate, I decided to stick to notes.

5. Locality

5.1 A central location: the price tag

This study was carried out in Golibar and Siddarth Colony, respectively located in Khar-East and Bandra-East. Both are located between the Western and Central railway lines. On a ten minutes distance for the city's new business district Bandra Kurla Complex, three kilometers from the international airport and close to the upmarket Western suburb Bandra-West, the prices are as high as 10,000 to 20,000 Indian rupees⁶ per square feet (Iqbal 2011). The central location increased not only the price of the land, but also led to increasing pressure for rehabilitation of various communities in this area.

5.2 Research site

Both a *chawl* (Siddarth Colony) and a slum (Golibar) community that were under rehabilitation were selected for this study. Areas that get declared as slum land and subsequently undergo rehabilitation are very diverse and can include well settled communities such as fisherman's villages, municipal corporation and private *chawls* (Bhide 2009; Das 2005). The rehabilitation is carried out by different developers across the city. In an attempt to get to provide a balanced picture I chose these two localities, which had different characteristics prior to rehabilitation and are rehabilitated by different developers.

5.2.1 The Golibar case

Golibar occupies 140 acre of land and is home to 26,000 families. The slum was established in the 1940's when the first settlers drained and filled the marshy lands. Golibar consists of several housing co-operatives all forming their own neighborhood within Golibar. Golibar has a mixed religious background and consists of Hindu, Muslim and Buddhist communities.

In Golibar the rehabilitations of different housing societies were merged without knowledge of the residents. The project was given to the developer, Shivalik Ventures. Further, the consent can be doubted. Shivalik Ventures claims a 92 percent consent on the rehabilitation. However according to *GharBachao* only 52 percent of the population consented. Moreover, fraudulent consent has been uncovered. For instance, people who died already years before the consent was raised appeared on the consent list. Likewise, the people of Golibar found records, through the Right To Information Act, that showed their flats as built though nothing had been built on the actual site (Birckenshaw 2013). Moreover, Golibar residents are being consistently

⁶170 to 340 US dollar

intimidated (Suresh et al. 2013). Bouncers contracted by Shivalik Ventures guard the construction side and slum to prevent people from rebuilding their demolished houses. Foremost shocking for me was that these bouncers harassed the local women; going as far as ripping of their *sari* blouses. As if this was not dehumanizing enough the police refused to take the ladies cases against the builder and his bouncers. This illustrates how the nexus of developers-politicians-police holds hands above each other's heads and closes their eyes for what is happening in name of development of the city. Being sexually harassed by these bouncers I cannot imagine what it is like to live under the eyes of these men.

This research in the slum side of Golibar concentrated on the people of the Ambewadi society. The people of Ambewadi are followers of Ambedkar's Buddhism. One of the issues they had with the rehabilitation plan as it was laid out was that there would be no temple for their caste. The temple is the central place in the community and the social life revolves around it. The houses had *pucca*⁷ structures. The neighborhood was in a poor condition as a result of demolition they have faced over the last years. Furthermore, the sewage systems in the slum area in Golibar were not maintained properly by the Brihanmumbai Municipality Cooperation resulting in daily floods of the system.

The transit camps in Golibar are far from temporarily. There are people who lived in the transit camps for over eight years. The biggest problem is that the transit accommodation does not get maintained properly; the building looks very unhygienic and health related issues have manifested themselves under the people living in the camps. For instance, most people fell ill in one of the buildings at the beginning of 2013 as the water had been infected. Reasons for the infection turned out to be inappropriate separation of the water pipeline and the sewage. Due to crowdedness and unhygienic circumstances the living conditions in the transit camps can be indicated as tough.

Another part of the research population of this study are the rehabilitated residents put up in high-rise buildings overlooking the slum. So far, an estimated 500 households have been rehabilitated. The buildings I visited were spacious from inside and consisted of 2 rooms a bathroom and a kitchen and a small balcony Hence the buildings were constructed very close to each other leaving no open space to the community.

5.2.2 The Siddarth Colony case

Siddarth colony is located near the government colonies in Bandra east and is with an area of 1.2 acres in total notably smaller than Golibar. Initially, Siddarth was home to 265 families living in

⁷ Solid houses typically made of concrete, stone, clay, tiles and/or metal.

hutments. In 1982 the area got redeveloped under the Hut Renovation scheme and eleven ground+1 *chawl* buildings were constructed. The plot belongs to the Maharashtra Housing and Development Authority who leased it the people of Siddarth Colony in 1982 for a period of thirty years. The colony has a housing committee called Siddharth Colony Hitsavrakshan Committee established in 1980.

In January 2004 the society of Siddarth colony appointed M/sSiddarth Construction (a unit of the Prathana Group) for the rehabilitation of the society and for redevelopment of its property under the SRS. This divided the society as part of the resident believed the land should have been redeveloped under the redevelopment scheme instead of under the rehabilitation scheme. The reason for this standpoint is that they are not a slum; how could the hutments that have been redeveloped in 1982 suddenly again be declared as a slum? Redevelopment instead of rehabilitation would have provided the residents with bigger housing.

During the course of this research 26 households were living in the chawls and were subjected to demolitions of the housing structures in January and May 2013. After my field research the news came to me that the complete structure has been removed and the families moved to the transit camp.

The transit camp in Siddarth is insufficient for the number of people living there; I estimate that 125 families inhabit the camp. The tenants are 110 square feet instead of the 180 as per SRA rule. As a consequence people sleep in the corridors. Furthermore, the building has not been maintained properly causing potentially dangerous situations. One example of this is the water tank that exploded last spring.

Thus far two new multi-storey buildings have been constructed four years ago. The buildings are each occupied by 63 residents. The tenants are 269 square feet and consist of a kitchen, bathroom, one living room and a small balcony.

6. Results

This section explains the results in the following order: satisfaction with life, housing satisfaction, community satisfaction and economic utility. Table I gives an overview of the main results that will be discussed in this section.

Table I
Descriptive statistics of satisfaction indicators

	All	Slum/chawl	SRA	t-value	Correlation
	Mean	Mean	Mean		with
	(Sd)	(Sd)	(Sd)		satisfaction
	N=83	N=83	N=83		with life
Satisfaction with life	4.87 (1.59)	3.97 (1.60)	5.44 (1.31)	-4.357*	-
Housing Satisfaction	7.26 (2.73)	6.97 (3.33)	7.44 (2.30)	-.702	.329*
Community satisfaction	7.77 (2.28)	8.34 (1.84)	7.40 (2.47)	1.852***	-.255**
Discretionary income (INR)	16467 (13348)	14438 (17834)	17834 (13818)	-1.096	.120

* significant at $\alpha=0.01$ ** significant at $\alpha=0.05$ *** significant at $\alpha=0.10$

6.1 Satisfaction with life

An analysis of internal consistency was conducted to determine if the SWL scale is reliable. The Cronbachalpha was 0.74, which indicates a high level of internal consistency.

As shown in table 1, the mean score of SWL for slum residents (M=3.97) and rehabilitated residents (M=5.44) was shown to differ significantly. The average score of 5.44 for rehabilitated residents tells us they scored high on life satisfaction. They feel that things are mostly good in their lives. This score is higher than the average score in developed countries. Scoring 3.97 on the SWL scale means that the slum residents scored slightly below the average global level of life satisfaction which is between 4 and 5. In general, scores below average life satisfaction call for reflection. Temporary dissatisfaction is a common phenomenon (Diener 2013).

Respondents in the slum and *chawl* often referred to happier times, suggesting that the dissatisfaction is a recent phenomenon. Numerous respondents associated their dissatisfaction with the SRS destroying their neighborhood as I illustrated by this quote from a resident: “Before when all the houses were still there, we were happy. We used to organize festivals together, but now we don’t do that anymore because of the demolitions.” The rehabilitation and the resulting demolition lead to uncertainties within the community, one respondent explained: “My daughter asks me every day when the bulldozers will come. What will I tell her?!” The rehabilitation, which is controversial and unwanted by the majority of the residents who wish to remain in their current dwellings is a constant threat to their houses and often interrupts people’s daily routines. The relative negative score for those living in the slums could be because of the negative events they experienced in the period of the interviews. Nevertheless, these negative events in which people get evicted from their homes after refusing to accept the rehabilitation are common throughout the city and happened also in Ram Nagar, Indira Nagar and Koliwada.

6.2 Housing satisfaction

The data shows that rehabilitated residents are more satisfied with their housing than slum residents. The high average rating of housing satisfaction in both groups, 7.0 (SD=3.326) for slum residents and 7.4 (SD=2.296) for rehabilitated residents suggest that both groups are satisfied with their houses, despite the big difference in the objective quality of their houses. Moreover, satisfaction with housing was found to positively associate with well-being, suggesting that a higher satisfaction with housing also results in higher levels of well-being.

The structured questionnaire that was conducted included questions on housing attributes to be able to reflect on the objective housing quality. This included questions regarding size, number of rooms, water pipe line connection, toilet and electricity. The findings are presented in Table II. Slum residents lived in *pucca* and *chawl* structures which are bricked houses with concrete structures. Most households did not have private bathrooms and would use the community toilets, where one has to bring their own buckets of water. These living conditions are very different from what I found in the SRA flats. Objective improvements in housing quality once rehabilitated are private toilets and private water pipeline connections. Rehabilitation therefore leads to a big improvement in hygienic conditions for most slum residents. Notably, both slum residents and rehabilitated residents had 24/7 electricity in the last month. The slum residents have electricity through Reliance, one of India’s main power suppliers. This is remarkable as many slums in Mumbai or elsewhere do not have access to this facility. The rehabilitated residents were found to have bigger houses on average. Evaluating the quality of housing, one should also look at the quality of constructions. During the fieldwork

various cracks were observed in the construction of new SRA buildings in Siddarth colony. Furthermore, one of the buildings that was already occupied did not have sufficient emergency exits. An extra staircase was under construction, but seemingly it was not built on a strong foundation; it was merely attached to the existing structure. The inferior building quality, particularly in Siddarth colony, contrasts with the findings of Sheth et al. (2009) in Jogeshwari-Vikhroli Link Road where reportedly functional and well-built flats are allotted to the rehabilitated residents. In line with my observations, newspaper articles reported poor construction related incidents at SRA buildings, some even causing deaths (Echanove and Srivastava 2013; Baliga 2013; ExpressIndia 2007). Evidently, weakness of the constructions of the SRA buildings is my major concern and better monitoring is highly desirable.

Table II
Housing attributes

	Slum residents	Rehabilitated residents	T-value	χ^2 value
Average size of the dwelling	171 sq. ft. (SD=56)	238 sq. ft. (SD=23)	-6.328*	
More than one room	50%	16%		10.527*
Private water pipeline connection	78%	100%		11.958*
Reliable and sufficient water supply	81%	78%		0.125
Private toilet	44%	100%		11.402*
Average hours of electricity available	24	24		

* Significant at $\alpha=0.01$

Rehabilitated residents say they are happy about the improvements in their housing conditions. One resident commented: “It was very congested in the *chawl*. Here there is more personal space, which I am happy about.” Another resident also feels they should not complain as it is an improvement compared to their previous living conditions: “Earlier life was difficult in the slum, we did not have proper bathrooms and ventilation. Whatever they have constructed we should be happy with.” Moreover, a significant increase in day light and ventilation has been observed and it has been argued in a study by Sheth et al. (2009) that residents reported improvements in living conditions after rehabilitation.

Though the majority of the people who resides in the flats indicated that they have no plans to move out of the building, some households said they were thinking of it, because the

houses are small for extended families. However, on average, the flats were found to be significantly bigger than the houses in the slum. Based on Biwas-Diener and Diener (2001) who in a study on satisfaction in slums in Calcutta found objective housing to significantly correlate with housing satisfaction. However, no statistically significant difference was found in my data, which is attributed to the already high level of satisfaction of the slum residents.

The qualitative data collected shows that slum residents often feel very attached to their house. Their families have been living there for generations, which leads to feelings of attachment. “I’ve been happy and was attached to this place, but last January they demolished my house. No matter how big my future house will be, I won’t be happy.” The housing satisfaction was measured as a *Likert* item and did not distinguish for emotional attachment. An adjusted housing satisfaction was calculated by excluding the slum residents who gave their housing satisfaction the highest score of 10. This would result in a lower average housing satisfaction of 4.9 (SD=2.807) for the group of slum residents. It appears that some slum residents are more satisfied with their houses than we would expect based on the objective housing conditions. The bimodal distribution of housing satisfaction of slum residents and the normal distribution of the housing satisfaction of rehabilitated residents explains why the housing satisfaction is not significantly different among the two.

6.3 Community satisfaction

Community satisfaction was found to be lower for rehabilitated residents than for slum residents. On average rehabilitated residents rated their community satisfaction with a 7.4 (SD=2.8), while slum residents rated it almost one mark higher with a 8.3 (SD=1.8).

As expected and formulated under hypothesis 2, rehabilitated residents have a lower community satisfaction. However, other indicators (community bond and frequency of interaction) that have been tested, for do not complement this view. Remarkably, the rehabilitated residents turned out to be divided about the changes in the community bonds, the majority indicating that it has improved since the rehabilitation. When I asked the rehabilitated residents in what ways community bonds had changed since the rehabilitation, 47 percent said it got a little or much better, whereas 26 percent said it has become a little or much worse (Figure 2).

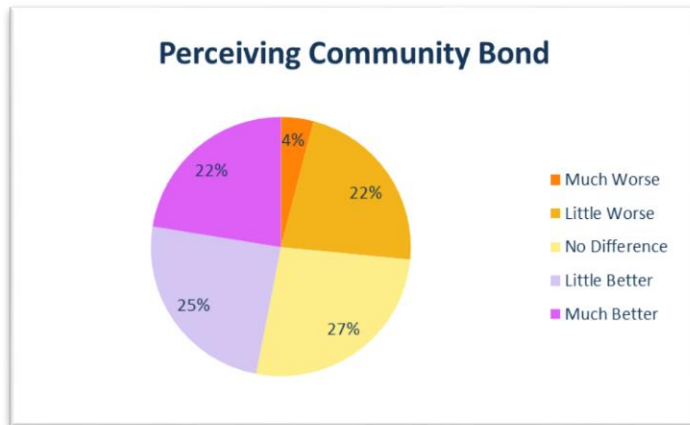


Figure 2: the perceived change in community bond by rehabilitated residents

The rehabilitation created a clear rift between rehabilitated residents and slum residents (Suresh et al. 2013). As initially only a few buildings were constructed only relatively influential members of slums were able to secure the flats. This has raised suspicion under the remaining slum residents about issue of transparency in allotting the flats. Besides, once the flats were secured, the rehabilitated residents started to see the building as their new community of which the slums where no longer part of. In addition, disagreement regarding the rehabilitation continued to exist. Protests and legal cases filled by the slum residents to change in the rehabilitation process and housing provision set the two groups further apart. This development was not exclusive to the communities of these studies, but was reported to exist in other SRA projects as well. “The machinations of the SRA scheme have fragmented these communities, created suspicions and fights among them and made them more vulnerable.”(Suresh et al. 2013, 14).The rehabilitated residents who denoted that the community bond changed positively mostly referred to the community bond exclusively within the building. Others who stated that the community bond decreased after rehabilitation often referred to the community as whole, including the slums. One of the rehabilitated residents affirmed: “the degree of solidarity decreased after moving”.

The data shows a significant association between the type of housing and frequency of interaction with neighbors ($\chi^2 (2) = 4.07, p < 0.01$). This opposes to the notion of Sheth et al. (2009) that the closely clustered units in the SRA buildings provoke an active social life. According to longitudinal study by Bradburn (1969) an active social life has been positively associated with wellbeing. Following Bradburns theory a decrease in the frequency of interaction can lead to a decrease in community satisfaction. Nevertheless, the percentage of rehabilitated residents that said to have daily interaction with their neighbors still remains relatively high (80 percent).

In terms of access to community space, no difference was found between the rehabilitated residents and the slum residents. SRA buildings often have a space just in front of the houses which according to Sheth et al.(2009) enhances the community and street life. My study only partially supports his argument, because the open place was only used for gatherings by a selective group of residents who were observed to be mainly men and played loud music. This especially caused inconvenience to people living on the first floors and women said it discouraged them to use the place for recreational purposes.

Coming to the nature of the community interaction residents have stated that this has changed after rehabilitation. Supporting my findings, housing activist Simpreet Singh from *Ghar Bhachao Ghar Banao Andolan* (Save Homes Build Homes Movement) recognizes that moving from a place characterized by public nature to a private nature space has social implications: “It is also an important change in terms of privacy. In a slum you are always in the public. Having a private space may add to change in perceptions. However public space may create social support systems, which are absent in private space.” For instance, 68 percent of the slum residents said they would ask their neighbors to lend them some money if they needed some. In the case of rehabilitated residents, only 28 percent indicated they would do so, adding to the argument that slum rehabilitation changes the community dynamics. Open space is inherent to a *chawl*. The open character of *chawl* and slum life generates social support systems. “If I need emotional relief, I come here [the open space between the *chawls*, red]. We cannot do without each other. We talk a lot and look after each other’s kids.” This view is supported by Sheth et al. (2009), who argued that the dense living conditions contribute to a high level of social interaction in slums. Subsequently, rehabilitated residents linked the gated nature of the flats to the decrease in community bonds: “The community bond was stronger there, as the *chawl* was an open area where people use to interact more and hence the unity was much more there as compared to this place.” It is the nature of the interaction that has changed due to the environment.

Furthermore, it should be noted that the system of allotment possibly also contributes to a lower community satisfaction. This was attested within the transit camps, where people from different societies with different religious background lived together in the same building. Resulting communal tensions and riots at the beginning of this year, when both Hindus and Muslims disrespected each other’s religious symbols, tensed the relations in the community. Unfortunately, data on mixed SRA flats is lacking as they refused to participate in this study. This might have altered the results as the rehabilitated residents I interviewed stayed with people from the same society they used to stay with previously.

6.4 Discretionary income

Rehabilitated residents have a higher discretionary income than slum residents, because of lower utility costs. The average monthly discretionary income of rehabilitated residents was found to be 17,834 INR (SD = 12564) in comparison to 14,438 INR (SD=13818) for slum residents. Discretionary income was positively, but not significantly, associated with well-being ($r = .120$) which can be explained by the high variation within both groups.

There are some key concerns on the impact of slum rehabilitation on the livelihood of the slum dwellers. For instance Bhide (2009) points out that many of the home based businesses in the informal sector at Dharavi will disappear when the multi-storey buildings are constructed. This is primarily because Dharavi is home to many commercial units and it would not be possible to run these businesses in 250 square feet tenements. Similar concerns on the loss of livelihood have been raised by Patel and Arputham (2007). They all are in favor of the opinion that slums are an economic entity which is disturbed if there is not enough thought given to alternate ways of continuing home based work opportunities in which the slum dwellers are currently engaged in. However, my study does not support such notions. Most of my respondents perform regular wage employment outside their community and the slum had a purely residential function. In some households the family depended on stitching cloths, which they continued even after moving to their new flats. Thus the sources of income have not been under threat by the rehabilitation scheme and no significant difference in net income levels between the rehabilitated residents and the slum residents was found ($\alpha=0.1$). This is confirmed by the rehabilitated residents, of which 31 percent said to find no difference in the ability to continue work. The remaining 69 percent felt they had better opportunities to continue their work. Likewise Sheth et al. (2009) found that rehabilitation provides more work opportunity. In fact the vast majority rehabilitated residents said their work opportunities were positively affected by the rehabilitation; only 4 percent said they now have less work opportunities than they used to. The argument for loss of livelihood might hold true for specialized slums like Dharavi which has been traditionally bought up as a manufacturing hub, but many slums in Mumbai would invariably fall in the same category of Golibar and Siddarth colony, where residents work elsewhere and the area is primarily used for residential purpose. Very little people are entirely depended on home based work that requires elaborate space to carry out.

Rehabilitated residents faced significantly lower utility costs compared to slum residents. The average spending on gas, water and electricity in the slums was 1990 INR (SD=637). Rehabilitated residents on average paid 1657 INR (=852). The lower utility costs might be

induced by saving strategies of the rehabilitated residents. In interviews rehabilitated residents said that the price of living had increased since rehabilitation: “The cost of living went up. Some people have a difficult time to pay their bills. The maintenance costs, costs of water, it all keeps going up.” The extra costs of living in a flat, raised in the form of maintenance cost, are on average 619 INR (SD = 231). This would make the average housing cost for rehabilitated residents 2230 INR (SD=841). Hagelund (2009) performed a study on the welfare effects of slum rehabilitation in Mumbai and found 40 percent of her respondents to report tighter economy post rehabilitation due to maintenance cost.

7. Discussion

This study shows that if one is among the initial slum residents that get rehabilitated, improvements in well-being are experienced. However, the SRS has led to many scams and irregularities are frequent (Suresh et al. 2013). In Golibar and Siddarth this also leads to uprooting and alienation of many people. The improvement in well-being of one group is therefore a mode of differential inclusion. Others suffer tremendously: the slum residents who see their houses being taken, but who are not given a flat; the ones that spend eight years in transit camps, not because of their opposition but because of malpractices by developers (Anand and Rademacher 2011).

Hence, this study finds a paradox in the domains that are expected to contribute to the well-being improvements experienced by the rehabilitated residents. Housing satisfaction and discretionary income both showed strong correlation with SWL. However, the variables did not show significant difference between the rehabilitated residents and the slum residents – leading to a rejection of hypotheses 1 that rehabilitated residents have a higher housing satisfaction compared to slum residents. For discretionary income the picture is a little more diffused; rehabilitated residents do not have significantly lower incomes as expected under hypothesis 3. Hence, the housing costs are significantly higher. The lack of a significant difference in discretionary income can be induced by various factors. For instance, it is possible that the wealthy residents have been rehabilitated first. Likewise, it is also possible that rehabilitated residents work more to cope with the increase in housing costs. Lastly, community satisfaction cannot explain the increase in well-being experienced post rehabilitation; the variable counter intuitively negatively correlated with wellbeing, which is probably a spurious correlation. However, as expected under hypothesis 2, rehabilitated residents rated their community satisfaction significantly lower than slum residents. The paradox of no clear income drawbacks, decreased community satisfaction and an insignificant difference in housing satisfaction can be explained from the qualitative data and the research design.

Assuming that the correlation of community satisfaction with SWL is indeed a spurious correlation we see a pattern of decreasing community satisfaction post rehabilitation. However, community satisfaction remains relatively high. No significant changes in the economy of the households and an increase in housing satisfaction, would lead us to believe that housing satisfaction leads to the increase in well-being together with the factors that I did not account for. Measurement bias as a result of an insufficient control group can explain this. The well-being levels of slum residents, which were taken as a baseline level to assess the changes in the experienced well-being after rehabilitation, might have not been representative for the well-being

levels of the rehabilitated residents prior to their move into high-rise. The demolitions of the houses of the slum residents have a strong influence on the experienced well-being and are therefore likely to have altered my results. The bimodal distribution of 'housing satisfaction' is likely to be a result of the weakened housing structures and the constant threat of eviction. Complementing this picture with qualitative data we see that the majority of the rehabilitated residents stated the improvements in facilities and housing as the most positive outcome of the rehabilitation. Research of Takeuchi et al. (2008) has shown that housing attributes and facilities are highly valued. According to her study living in a high-rise is worth 730 INR a month. Using utility theory she thereby argues that people are willing to pay an additional 730 INR a month compared to their expenditures in a slum to live in a multi-storey building. Subsequently, Bookwalter and Dalenberg (2004) expressed similar views stating that basic housing plays one of the most important roles for the poor in enhancing their well-being.

The effect of rehabilitation on the well-being of the residents can only be interpreted by taking a closer look at what happens prior to rehabilitation. Many slum residents find their well-being affected by the prospects of rehabilitation, as they are emotionally attached to their houses and face demolition of their structures. Furthermore, residents who do not consent are given no choice and are helpless. While they fight the rehabilitation they often stay in demolished or partly demolished structures that are dangerous and open to the elements, resulting in the lowest levels of well-being. The bias induced by this negative feeling, which is caused by the scheme is likely to have influenced my results. Yet, it should be acknowledged that controlled experiments are impossible in this case, because the SRS is already in force. So either one has to deal with this in the comparison between the two groups or rely on the memory of the rehabilitated residents, which often leads to memory bias (Biwas-diener and Diener 2001). A way to deal with this in the future would be to create a model that also account for the negative feelings induced by the demolition when comparing the well-being levels of the two groups. Moreover, the alternatives to the market oriented type of PPP such as community based upgrading under the operational Rajiv Awas Yojana scheme should be evaluated (Suresh et al. 2013). This assessment would be a significant addition to literature, given that community based redevelopment might be able to secure similar results in the field of housing satisfaction, without the drawbacks in the community domain.

This research does not show how the slum residents would have fared in the absence of SRS or the demolishment practices of the state machinery. The bulldozing practices, carried out without any official policy, have been common throughout the city as Anand and Rademacher (2011) argues. Ramanathan (2005) expressed similar notions of demolition practices coexisting

next to the SRS. The poor housing conditions after such a demolition dominate peoples' life, keep them awake at night and keeps kids out of school, as became clear from the interviews I conducted. The far-reaching negative impact of the SRS should be acknowledged and not be belittled. It seems to be a serious side effect of the current implementation of the scheme. Hence, more research is needed to lay out the long term implications for the well-being of these people. A longitudinal study could provide insights in the changes over time and track the well-being of the same group of participants during the entire rehabilitation process. This would lay out how SRS affect the well-being by both rehabilitated and evicted communities over time. Better understandings of the experience of the scheme can help us to pinpoint improvement for Mumbai's social housing policies.

The SRS affects a large number of people in Mumbai. This research provides an evaluation of the scheme as it has been implemented in two localities in Mumbai. It is important to note that this localities were not selected randomly, which makes generalization difficult. However, as Suresh et al. (2013) shows the illegal practices are not exclusive to these places. Based on my results it can be concluded that the SRS leads to exclusive well-being improvements to those who manage to get a hold on the flats and are favouring the rehabilitation. Yet, the scheme in Mumbai is representative for other PPP in the field of social housing in India in the sense that they have a strong focus on private developers (i.e. in Calcutta), while PPP potentially can include housing cooperatives, non-governmental organizations and community organizations as well (Sengupta 2006). However, the land market in Mumbai is unique (Bertraud 2011). Mumbai's location on a peninsula, together with policy constrictions on FSI, muddled property rights preventing the trade of land and a weak primary infrastructure resulted in unnecessary high prices and a locked housing market (ibid.). This has contributed to the limited successes of the scheme (Annez et al. 2010). Furthermore the scheme is often carried out with the help of local crime groups. With the high land prices property development became one of the 'development mafia's most profitable activities (Weinstein 2008). The introduction of the SRS made informal and formal governance of the slums more intertwined than ever before (ibid.). Due to these specific legal, institutional and geographical circumstances, the results of this study are limited to Mumbai's SRS context. This study suggest that SRS can be successful in Mumbai as it is shown to lead to higher levels of wellbeing, but only if structural problems on an institutional level of the housing market are solved first so that the scheme can be more inclusive.

8. Conclusions

The majority of Mumbai's population lives in slums. Since the end of the 19th century different schemes have been implemented to eradicate slums and/or to improve the living conditions of the urban poor. The latest attempt of the Maharashtra state government to battle the ever-increasing number of slums across the city stems from 1995 and is called the Slum Rehabilitation Scheme (SRS). The SRS marks a clear shift in Mumbai's slum and housing policies towards an enablement approach; leaving construction to the market while the legal role of the government enforces the rehabilitation to take place. The program aims to provide 4 million households with new houses free of costs through collaboration with private developers. To gain insight in the success of the SRS from a peoples' perspective, the subjective well-being levels of rehabilitated residents are compared with the well-being levels of slum residents.

I argued that taking subjective-wellbeing as a measure can make a positive contribution to social policy evaluations, because it provides us insight in what leads people to evaluate their life positively. The framework presented in this thesis is built on the domain-of-life approach and was designed to assess experienced changes in ones well-being in the domains of housing satisfaction, community satisfaction and discretionary income from rehabilitation into a high-rise building. These changes were measured by comparing the wellbeing-levels of people currently living in the slum with those of people who have already been rehabilitated.

It was shown that rehabilitated residents were, on average, more satisfied with their lives than slum residents. These results oppose the view that high-rise cannot be a solution for slums with a high population density to increase the liveability of the area.

Objective housing quality showed to be improved in terms of hygiene. Rehabilitated residents all have their private bathrooms and private water connection, which they mostly feel happy about. Though the SRA flat residents have on average bigger houses, they miss the comfort of multiple rooms they enjoyed in the slums. Surprisingly, no significant difference was found in the levels of housing satisfaction between both groups, while you would expect major differences based on differences in the objective quality. This is likely to be the result of the scores of the slum residents being bimodal distributed as a result of the SRS induced hardship they face.

Contrary to the view that at lower economic levels income has a larger impact on well-being, discretionary income was not found to significantly correlate with well-being. One of the reasons might be that the respondents of this study are not among the poorest and make up for a diverse income group. The loss of livelihood argument does not hold either in the case of

Golibar and Siddarth. Their area simply had a primarily residential function and was not intertwined with their primary source of income.

The residents experienced lower community satisfaction post rehabilitation. Living behind closed doors individualism could increase. Moreover, the system of allotment might mean new neighbors. Furthermore the SRS is a clear drift between the ones who are rehabilitated and the people who still reside in the slum; creating a sphere of us against them.

The multi measures approach to slum rehabilitation produced a picture of a scheme of exclusion; improving the well-being of a few. Ironically, the SRS which is meant to provide housing, leads to forced evictions and denies the right to shelter to thousands of Mumbaikers. This is not a new observation, yet this study shows that rehabilitated residents evaluate their life more positively. The gained knowledge of the positive contribution of rehabilitation to the well-being of the people who got rehabilitated should serve as an incentive for policy makers to improve the functioning of the scheme by increasing its exclusiveness and exploring other ways to improve housing conditions.

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Appendix I: structured questionnaire

Please note, that the Hindi translation of the questionnaire is available upon request.

RESPONDENT NUMBER

PART A: GENERAL INFORMATION

Could you please answer a few questions about yourself before we start the interview?

A1. What is your full name?

A2. How old are you? _____ YEARS

A3. What is your sex? _____

FEMALE 1

MALE 2

A4. What is the highest grade you have attained in general schooling? _____

SRANDARD 1 – 12

BACHELORS 13

MASTERS 14

OTHERS 15

A5. Do you speak English? _____

YES 1

NO 2

A6. How long have you lived in this community? _____ YEARS

A7. How many people are members of your household? _____ HOUSEHOLD SIZE

Interview	
Date	<div style="text-align: right;"> <input type="text"/> / <input type="text"/> 2013 DAY / MONTH </div>
Time started	<div style="text-align: right;"> <input type="text"/> / <input type="text"/> <input type="text"/> HOUR/MINUTE </div>
Time ended	<div style="text-align: right;"> <input type="text"/> / <input type="text"/> HOUR/MINUTE </div>

PART B: SATISFACTION WITH LIFE

Below are five statements that you may agree or disagree with. Using the 1 - 7 scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item. Please be open and honest in your responding.

- 7 - Strongly agree
- 6 - Agree
- 5 - Slightly agree
- 4 - Neither agree nor disagree
- 3 - Slightly disagree
- 2 - Disagree

- 1 - Strongly disagree

B1. In most ways my life is close to my ideal.

B2. The conditions of my life are excellent.

B3. I am satisfied with my life.

B4. So far I have gotten the important things I want in life.

B5. If I could live my life over, I would change almost nothing.

B 6. Total score

THE SUM OF THE SCORES ON THE ABOVE STATEMENTS

PART C: DESCRIPTION OF THE DWELLING

Now, I would like to ask you about your housing conditions.

- C1. What type of dwelling is it? _____
- | | |
|----------------|---|
| KUCCHA | 1 |
| PUKKA 1 FLOOR | 2 |
| PUKKA 2 FLOORS | 3 |
| SRA FLAT | 4 |
| TRANSIT CAMP | 5 |
| OTHERS | 6 |

C2. How many rooms do the members of your household occupy? _____ NUMBER OF ROOMS
DO NOT COUNT BATHROOMS, KITCHEN, BALCONIES AND CORRIDORS.

C3. How many, if any, of these rooms are used for family businesses? _____ NUMBER OF ROOMS
WRITE ZERO IF ROOMS ARE NOT USED FOR BUSINESS

C4. What is the space of your dwelling including living and accessory space? _____ SQUARE METERS

C5. How long has your household been living in this dwelling? _____ YEARS

C6. In approximately what year was this dwelling built? _____ YEAR BUILT
ASK THE RESPONDENT TO PROVIDE AN ESTIMATE IF NOT SURE ABOUT THE EXACT YEAR

C7. Do you have legal title to the land or any document that shows ownership? _____

- YES 1
NO 2

PART D: HOUSING SERVICES

I would like to ask you some questions regarding the services available in your dwelling.

D1. What is the main source of water for drinking and cooking for your household? _____

- BOTTLED WATER 1
PRIVATE CONNECTION TO PIPELINE 2
PRIVATE WELL 3
PUBLIC TAPS/STANDPIPE 4
PUBLIC WELL 5
VENDOR (TRUCK) 6
NEIGHBOURS 7
RIVER, STREAM, LAKE, POND 8
RAINWATER 9
OTHER (SPECIFY _____) 10

D2. How reliable has your water source been over the last month? _____

- VERY RELIABLE, I NEVER HAD A WATER SHORTAGE 1
SOMEWHAT UNRELIABLE, THERE WERE A FEW DAYS I HAD NO ACCESS TO WATER 2
UNRELIABLE, EVERY DAY IT IS A QUESTION IF THERE WILL BE WATER OR NOT 3

D3. Where do members of your household bathe? _____

- INDOOR BATH/SHOWER FOR HOUSEHOLD ONLY 1
INDOOR BATH/SHOWER SHARED WITH OTHER HOUSEHOLDS 2
OUTDOOR BATH/SHOWER FOR HOUSEHOLD ONLY 3
OUTDOOR BATH/SHOWER SHARED WITH OTHER HOUSEHOLDS 4
PUBLIC/COMMUNITY BATHS 5
OTHER (SPECIFY _____) 6

D4. What is the type of toilet that is used in your household? _____

- FLUSH TOILET 1
TRADITIONAL LATRINE 2
VENTILATED IMPROVED PIT LATERINE 3
BUCKET 4
OTHER (SPECIFY _____) 5

D5. Is this toilet or latrine only used by member of your household or do other household members use it as well? _____

- THIS HOUSEHOLD ONLY 1
OTHER HOUSEHOLDS AS WELL/COMMUNITY TOILETS 2

D6. Do you have to go out of the dwelling to reach the toilet or latrine? _____

- YES 1
NO 2

D7. How many hours a day on average was electricity available in your dwelling last month?
 _____ NUMBER OF HOURS

PART E: DWELLING EXPENDITURES

The next questions will be about your housing expenditures.

E1. Do you own this dwelling?

- YES 1
- NO 2 >> GO TO QUESTION E4

E2. Does any person who is not a member of this household pay all or part of the rent or provide the housing free of charge? For example, a relative, private employer, governmental or public organization, private person or organization? _____

- YES, PAYS RENT 1
- YES, PROVIDES DWELLING FREE OF CHARGE 2
- NO 3>>GO TO QUESTION E4

E3. Who pays part or all of the rent for this dwelling or provides this dwelling free of charge?

- RELATIVE 1
- EMPLOYER 2
- PUBLIC AGENCY 3
- PRIVATE PERSON/AGENCY 4
- OTHER 5

E4 How much did your household pay in the last month for the following services?
 IF THE HOUSEHOLD DIDN'T PAY ANY, WRITE ZERO

a. Electricity	
b. Water	
c. Gas	
d. Trash collection	
e. Elevator fee	
f. Apartment building fees/maintenance	

ASK THE NEXT QUESTION ONLY IN CASE THE RESPONDENT ANSWERED IN THE PREVIOUS QUESTION THAT THEY DO NOT PAY FOR ONE OR MORE OF THE SERVICES.

E4. Why didn't you pay for these services?

a. Electricity	
b. Water	
c. Gas	
d. Trash collection	
e. Elevator fee	
f. Apartment building fees/maintenance	

- I CAN'T AFFORD 1
- I DO NOT USE THAT SERVICE, AS I DO NOT NEED IT. 2

I DO NOT USE THAT SERVICE, AS IT IS UNRELIABLE.	3
I DO NOT TRUST THE BUILDING COMMITTEE.	4
OTHERS (PLEASE SPECIFY)	5

PART F: SATISFACTION WITH HOUSING

Now, I would like to ask you some questions about your satisfaction with your house and the neighborhood.

F1. In general, how satisfied are you with this house on a scale of 1 to 10? _____

F2. In general, how satisfied are you with this community on a scale of 1 to 10? _____

F3. In general, how safe do you feel in this house on a scale from 1 to 10? _____

F4. In general, how safe do you feel in this neighborhood on a scale from 1 to 10? _____

F5. Do you plan to move to another unit within the next 12 months? _____

YES, DEFINETLY	1
YES, PROBABLY	2
YES, POSSIBLY	3
NO	4 >> END OF THE MODULE, CONTINUE WITH PART G

F6. Why are you thinking of moving? _____

Larger unit	1
Smaller unit	2
Cheaper unit	3
Informal unit	4
Formal unit	5
Closer distance	6
Other	7

PART G: COMMUNITY

I would like to ask you some questions about the neighborhood and the interaction with your neighbors.

G1. Is there a housing committee in your community?

YES	1
NO	2

G2. If there is a housing committee are you a member of the building committee? _____

YES, A MEMBER	1
NO, NOT A MEMBER	2

G3. Are there spaces within 10 minutes walking distance from your dwelling where you can have a moment for yourself in privacy? _____

YES	1
NO	2

G4. Are there open community spaces within 10 minutes walking distance from your dwelling where you can meet your neighbors? _____

YES 1
NO 2

G5. How often do you have conversations with your neighbors? _____

DAILY 1
WEEKLY 2
ONCE A MONTH 3

G6. If you need someone to ask for money would you ask your neighbors?

YES 1
MAYBE 2
PROBABLY NOT 3
NO 4

G7. If you need someone to look after your child in case of an emergence would you ask your neighbors?

YES 1
MAYBE 2
PROBABLY NOT 3
NO 4

G8. Did you live in the same community for the past five years?

YES 1
NO 2 >> END OF THE MODULE, CONTINUE WITH PART H

G9. Do you think the life of the people in this community is better or worse than it was five years ago? _____

BETTER 1
WORSE 2
NO CHANGE 3

PART H: LIVELIHOOD

The next questions will regard your employment and expenditures. (to identify changes in livelihood)

H1A. What types of employment do your household members perform?

PLEASE FILL IN FOR EVERY HOUSEHOLD MEMBER WHO CONTRIBUTES TO THE HOUSEHOLD INCOME.

HOUSEHOLD MEMBER	1	2	3	4	5	6
PRIMARY EMPLOYEMENT						
SECONDARY EMPLOYEMENT						

REGULAR WAGE EMPLOYEMENT 1
CAUSAL WAGE EMPLOYEMENT 2
SELF-EMPLOYED 3

ONLY ASK THIS QUESTIONS TO REHABILITATED RESIDENTS

H2. What type of employment did your household members perform before the rehabilitation took place?

HOUSEHOLD MEMBER	1	2	3	4	5	6
PRIMARY EMPLOYEMENT						
SECONDARY EMPLOYEMENT						

H3. Where do your household members carry out most of their work?

PLEASE FILL IN FOR EVERY HOUSEHOLD MEMBER WHO CONTRIBUTES TO THE HOUSEHOLD INCOME.

HOUSEHOLD MEMBER	1	2	3	4	5	6
PRIMARY EMPLOYEMENT						
SECONDARY EMPLOYEMENT						

- YOUR HOME 1
- OTHER HOME 2
- VEHICLE 3
- FROM DOOR TO DOOR 4
- IN THE STREET, NO FIXED PLACE 5
- IN THE STREET, FIXED PLACE 6
- OFFICE 7
- FACTORY 8
- OTHERS 9

H4. How long does it take you to get to work from here? _____ MINUTES
TIME ONE WAY ONLY

H5. For how many different employers did you work in the past 12 months? _____
NUMBER OF EMPLOYERS

H6. For how many different employers did you work in the last 7 days? _____
NUMBER OF EMPLOYERS

H7. On average, how many days a week do you work? _____

H8. How much was your last payment? _____ Rs.

H9. How many days have you worked for this payment? _____

H10. What is the approximately monthly expenditure of your household on the following items?

Food items	
Savings	
Recreation	
Spare time activities	

H11. If someone in this community needed a loan, from what sources might this be borrowed?

- _____
- | | |
|-----------------|---|
| GOVERNMENT BANK | 1 |
| PRIVATE BANK | 2 |
| COOPERATIVE | 3 |
| COMMUNITY GROUP | 4 |
| FAMILY/FRIENDS | 5 |
| OTHERS | 6 |

H12. How many kids do you have? _____

H13. How many of them are in school? _____

PART I: TRANSITION PERIOD (SRA FLAT ONLY)

Now I would like to ask you some questions about the period in which the redevelopment was taking place and you had had to move to the new place.

I1. How long was the period between you had to move out of the old house until you moved in the new apartment? _____ IN MONTHS

- I2. Where did you stay during the period that the new buildings where constructed? _____
- | | |
|--|---|
| IN MY OLD DWELLING | 1 |
| WITH FAMILY | 2 |
| IN A TRANSIT CAMP | 3 |
| IN A GUEST HOUSE, PRIVATELY PAID | 4 |
| IN A GUEST HOUSE, PAID BY THE REDEVLOPERS/GOVERNMENT | 5 |
| OTHERS | 6 |

I3. Did you face additional housing cost during the transition period? _____

YES	1
NO	2

I4. Did you make additional travelling cost during the transition period? _____

YES	1
NO	2

- I4. In general, how satisfied are you with the arrangements made by the developer and government during the moving period? _____
- | | |
|-----------------------|---|
| VERY SATISFIED | 1 |
| SOMEWHAT SATISFIED | 2 |
| SOMEWHAT DISSATISFIED | 3 |
| DISSATISFIED | 4 |

PART J: PERCEIVING REDEVELOPMENT

(1) ASK FOR THE RESPONDENTS LIVING IN THE SLUM

I would like to ask you regarding your expectations of the redevelopment. Do you think redevelopment would make these topics better or worse?

(2) ASK FOR THE RESPONDENTS LIVING IN THE SRA FLAT

I would like to ask you regarding the changes you experienced in your life due to the redevelopment. Do you think redevelopment made these topics better or worse for you?

	Much worse (1)	A little worse (2)	No difference (3)	A little better (4)	Much better (5)
1. Quality of the house					
2. Work opportunities					
3. Income possibilities					
4. Social status					
5. Community bond					
6. Relationship with neighbours					
7. Possibility to continue your work					
8. Health					
9. Safety					

Appendix II: topic list

Only ask the applicable questions and questions that have not been answered yet during the structured questionnaire.

- What is your most positive experience regarding the slum rehabilitation scheme?
- What is your most negative experience regarding the slum rehabilitation scheme?
- How would you describe your relationship with the other people in the community?
- Can you give an example of the interaction you commonly have with you neighbors?
- What do you think of the price of the maintenance cost?
- How do or did you experience the transition period?
- What has changed in the neighborhood over the last five years?
- What are the positive aspect of living in this house?
- What are the drawbacks of living in this house?
- What is your opinion on the construction of the building?