

COST BENEFIT ANALYSIS: SOCIAL RENTAL HOUSING

Think Piece 4: Social Indicators



This is one of four Think Pieces prepared by the Social Housing Foundation (SHF) based on the findings of a Cost Benefit Analysis (CBA)¹ of Social Rental Housing (SRH).

Key Policy Issues from the Cost-Benefit Analysis

- There is considerable national and international literature and research on the social and economic effects of housing. However, very little of this tries to measure the social and economic effects of different types of housing. In particular, almost nothing has been written about the impact medium-density housing has on social and economic conditions.
- The CBA methodology is based on quantifying specific costs and benefits that are specifically caused by housing. Ideally, there should be accepted national data and statistics on these key financial, social and economic factors in South Africa which would be used for this purpose. The CBA experienced a critical lack of existing data or research, especially information collected over longer periods of time.
- Due to the lack of data, a household survey of social and economic effects of housing was undertaken for the CBA. The survey provided useful results for the study. However, since it was a single survey of the housing projects in the CBA, it was difficult for example to measure what impacts housing has had over the years, or whether some of the social and economic impacts were caused by the incomes of households or the housing itself.
- The CBA and the survey showed the kinds of social and economic information that should be recorded over time so that housing programmes can be better assessed. Given that some R10 billion (2009/10) is being spent each year on the national housing programme, it seems essential that consistent information for assessment should be kept. The use of CBAs to improve housing policy and project decision-making has also been shown. Maintaining a good national statistical base and/or indexes will make it easier and less expensive to undertake these CBAs in the future.
- Serious consideration should be given to setting up a formal monitoring and evaluation system that subjects all housing projects to an ongoing impact assessment in order to inform policy. This should be extended to the development of a programme-level review which begins to understand and quantify the specific effects on household welfare and society over time.

Each paper highlights a specific theme extracted from the CBA which assessed the economic and social costs and benefits to South African society of SRH compared with RDP housing over a 40-year future timeframe. Applying CBA methodology to housing research is new and the findings have wide ranging consequences for future policy makers across all spheres of government. It is anticipated that the content of these papers will contribute meaningfully to public debate and policy making in relation to housing and urban development in the future.

This Think Piece considers the social and economic indicators needed to assess the impact of housing projects. The paper looks at the quality, availability and further development of social (and economic) indicators based on the research work undertaken as part of the CBA. Some direction is given about which indicators might be useful in going forward, and what needs to be in place for these indicators to be used for assessing housing impact. A programme for ongoing and continuous research to inform the national housing programme is also proposed.

¹ Social Housing Foundation (2009): Cost Benefit Analysis, RDP & SRH

CONTENTS

Background to this Paper
Cost Benefit Analysis

CBA Research Process
Limitations of the Existing Research Literature

Survey
Implications for a Future Research Agenda

Background to this Paper

The provision of subsidised housing has been one of the cornerstones of the South African government's broad social welfare programme since 1994. Social Rental Housing (SRH) and Reconstruction and Development Programme (RDP) housing (also known as BNG housing) are two housing types, amongst others, that exist within government's current housing programme.

Social Rental Housing is defined as a form of medium-density rental housing which is typically well located in terms of its access to urban areas. It is usually multiple storey housing due to the fact that it is built on prime land where land prices are high. The intended effect of SRH in South Africa is to:

- Contribute to urban restructuring;
- Address structural economic, social and spatial dysfunctionalities; and
- Improve and contribute to the overall functioning of the housing sector.

By contrast, RDP housing is mainly low-density, low-cost housing typically located on the periphery of towns which is owned by households. It usually consists of single storey housing constructed on separate plots. While SRH is the main focus of this think piece, RDP housing is frequently compared since it has been the dominant form of subsidised housing in South Africa to date.

Cost Benefit Analysis

Cost Benefit Analysis (CBA) methodology is new in South Africa in the field of housing and offers innovative ways of answering housing policy questions. CBA is a powerful economic decision making tool used to assess whether a (housing) project contributes to an increase in the general welfare of society or not. It does this by clearly identifying and quantifying in money terms the full range of costs and benefits of a housing project, over the entire life cycle of the project (40 years in the case of a housing project). The costs and benefits included are both direct ones (like the cost of building the house) and indirect ones (like the benefit of safer neighbourhoods).

The advantages of the CBA approach need to be balanced against some of its inherent limitations and restrictions. While it adds a valuable economic perspective to decision making, it does not replace the decision making itself, which should still contain other equally critical political and social considerations. Of necessity, a CBA simplifies reality and uses assumptions. While it attempts to include the most critical factors in these assumptions, assumptions are by their nature generalised.

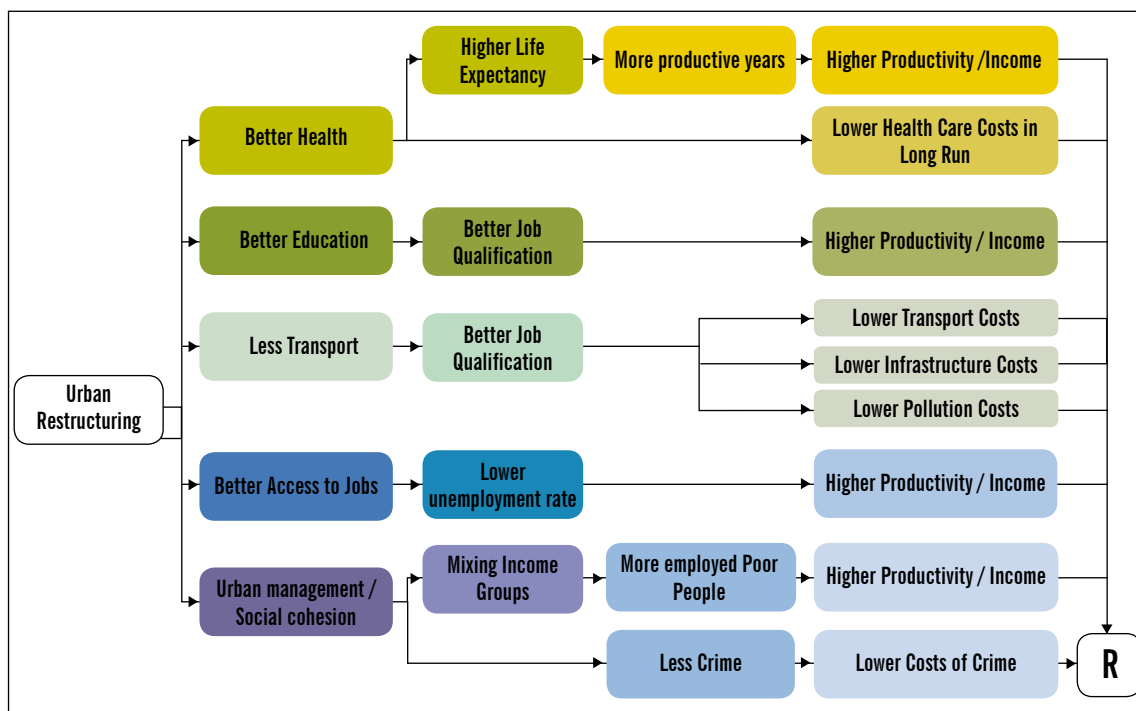
The CBA undertaken used six existing housing projects in South Africa; three from RDP-type housing and three from SRH-type housing. It included the development of a financial and economic model, extensive primary and secondary research collected through a social survey of some 600 households; a review of local and international economic literature in relation to housing and economic effects; and engaged with a dedicated project reference group, comprised of housing and economic specialists. The study also considered who in South Africa receives the costs and benefits through a distributional analysis, and considered the specific fiscal burdens or advantages to the government.

CBA Research Process

The CBA research process, utilising both the insights from a panel of experts and the broader South African housing policy debate, identified the primary intention and effect of Social Rental Housing as follows: *To contribute to urban restructuring in order to address structural economic, social and spatial dysfunctionalities; and to improve and contribute to the overall functioning of the housing sector.*

Reviewing the broader housing literature and utilising the insights of sector experts the CBA research process identified a number of possible indicators that could be assessed in order to determine whether a social rental housing project has in fact contributed towards “urban restructuring”. These indicators or effects included better health and education outcomes, reduced transport costs, improved access to job opportunities and overall better urban management and social cohesion. The broad causality framework hypothesis is indicated in the figure below.

Figure 1: CBA Causality Hypothesis



To be able to include these effects in the CBA, a link with a monetary variable needs to be defined. For instance, higher productivity or income or lower costs to society. In order to test and where possible quantify these hypothesis, data was required. A number of challenges were noted in this process. These are discussed below.

Limitations of the Existing Research Literature

A literature review undertaken as part of the CBA, focused on current thinking in respect of housing form (specifically medium-density housing) and its social and economic effects. The primary purpose of the review was to inform the development of the causality hypothesis as noted above. This review revealed a number of existing research papers that identified broader impacts of housing including most strongly:

- **Labour market flexibility** - a strong link between labour market flexibility and mobility and the availability of a range of rental housing stock.
- **Education** - there is some evidence to support a link to improved education outcome based on the locational access of housing.
- **Health** - there appears to be a broad consensus that formal housing – irrespective of tenure or typology plays an important role in improved health outcomes.
- **Integration** - there is significant evidence in respect of neighbourhood effects. Especially in areas of concentrated poverty there is a strong correlation with a range of negative social and economic impacts. Literature on “neighbourhood effects” concludes that neighbourhoods of concentrated poverty have a negative impact on the health and life opportunities of low-income families. This evidenced in increased school failure; lower workplace participation and negative health outcomes

While there is considerable literature in respect of the social and economic effects of housing as such and broader neighbourhood effects, there is little work on the effects of specific forms of housing rather than of housing in general. In particular there is little empirical evidence that statistically links housing variables to, for example, income, unemployment, etc.

In response to the limited existing research literature the CBA had to rely on the explicit explanation and testing of the causal relations between housing type and effects through the application of a household survey.

Survey

As part of the CBA study we undertook a household survey of some 600 households. The household survey served two purposes:

- It helped to obtain a better understanding of the impact of the housing on households. By asking questions on subjects as health, employment and crime, and asking households to what extent they feel their housing situation contributes to these effects, we were able to test our causality assumptions.
- It enabled collection of micro-level data about the costs incurred by households and thereby contributed to the valuation of key economic effects.

The objective of the survey was to provide information on households living in RDP and social housing projects, in order to determine the impact that the type of housing has on their lives. The indicators assessed were:

- Employment
- Motivation to change accommodation & previous dwelling
- Social cohesion
- Education
- Health
- Crime
- Access to services
- Transport: mode, time and costs
- Income and expenditure.

The sample was designed to draw 100 respondents (insofar as they existed within the inclusion criteria) randomly within each of the 6 areas.

- RDP inclusion criteria: Households with a minimum monthly household income of R3,500. (This strategy was adjusted in Potsdam, Eastern Cape, because almost none of the residents qualified. A quick census was done of household income and it was decided that the top earners in Potsdam will be included which resulted in households with a minimum monthly household income of R950).
- Social housing criteria: Households who received a subsidy when they first occupied the unit.

Findings from the survey support a number of the hypotheses and point to future research agendas. These include:

- **Education.** Potsdam RDP showed an out-of-the-ordinary rate in both drop-out and missing school. This is because this housing project is also a significant distance away from the CBD.
- **Employment.** The survey results show that in Potsdam particularly, there are a very low percentage of residents that have accessed a better job while moving into a new house. In general, more residents in SRH have accessed better employment opportunities since moving into SRH.
- **Transport.** The results corrected for income effects show a large difference in travelling time while expenses on travelling are almost equal between the two housing forms. This leads to the conclusion that location, or housing, is the cause of the difference in travelling time and not income.

Findings that did not support the initial hypothesis include:

- **Health.** The expected effect was that the accessibility of healthcare impacts on the level of health. On average, RDP residents experience a longer travelling time to public health care facilities than those in SRH. If a level of health is constructed as a variable, it shows improved relative health for SRH residents as compared to their previous housing. However, if this is related to the number of sick days per year, RDP residents show a lower number. This does not correspond to the hypothesised effect. There is evidently another causality at work here. The conclusion reached is that there is no health effect due to location of housing.

- **Crime.** The results show that while the two SRH projects surveyed are in neighbourhoods with high crime levels, the crime rate in the building itself is equal to or lower than in RDP houses. The results indicate that, on average, residents in SRH experience more crime in their building on a per year per resident basis than those in RDP. When corrected for income effects, on average, it can be seen that in SRH, the neighbourhood has a higher occurrence of criminal activity, while crime in the building shows varying outcomes. Further research is necessary before any definitive conclusion on this topic can be determined.

Although the survey provided useful information for valuing effects, there are several issues that prevented making use of all the output. Key issues noted were the following:

- **Duration of occupation.** In the case of two of the projects residents has been occupying units for no more than a year. This raises a question as to whether this is sufficient time to effectively assess any impact of the housing or the household.
- **Income difference.** The income differences between the residents in RDP and SRH are substantial. The intention was to interview households with similar income levels. In relation to RDP, this meant households with an income level of above R 2,500 per month and in relation to SRH households, those who qualified for a subsidy and thus earned less than R 3,500 per month at time of entry. The average incomes in the different projects were in reality not similar with SRH residents with a much higher average income than RDP residents. This is an important factor when further causalities are considered.
- **Previous dwelling.** Obviously both RDP and SRH residents moved into their new houses coming from various previous dwellings. However, these previous dwelling might include different types ranging from informal shacks to formal housing. This study did not have a control for this difference in housing background.

Implications for a Future Research Agenda

The CBA social survey, despite its limitations, proved invaluable in this specific study by:

- Helping us to test our causality assumptions; and
- Helping us to find input for valuation (quantification of costs)

The starting point should remain a literature / empirical analysis on causality, following from that collection of data, ideally monitored at the project level. This is however a rather ideal situation, which not many countries have, so perhaps we should focus for the short term on more literature research on the above mentioned points and long term monitoring of general effects of health, education, etc,

However it is probably not sustainable to undertake a full survey of every project for which a cost benefit analysis is to be undertaken. Some suggestions that should be considered going forward include the following:

Longitudinal studies and real experiments

The mixed results from the CBA social survey suggest that, going forward, policy makers require more statistically sound data that effectively measures the impact of specific housing types on the welfare of households.

There is clearly a need to undertake a greater number of **project specific surveys** in order to obtain reliable information from a range of locations and particular conditions. Such studies are costly and are unlikely to address the concerns of the length of residence which is particularly important in order to assess changes in household welfare resulting from particular access to housing opportunities.

The ability to track impact on a long-term basis would assist with eliminating some of the income distortions observed in respect of social rental housing. Housing policy development could therefore be enhanced by further **empirical analysis of the long term effects** of different types of available housing. This would require the development of a national research programme – possibly utilising panels of household respondents - who are tracked over long periods of time. In essence these comprise “real experiments”. Alternatively the monitoring of variables such as those identified and developed in this CBA could be a first step to such a process.

Closely allied to the above is the need to **influence the national statistics collection programme** in order to ensure that key variables and dimensions are included in national surveys such as Census, Community Survey and General Household Survey. The development of such data could be utilised to start **developing national indexes of key variables by housing type over time**.

What should be measured?

In developing particular project surveys or a national research agenda, key questions that need to be considered include: i) which indicators are the most appropriate measures for the economic and social effects of housing?, and ii) which indicators can be identified that measure the effect of housing typology instead of location or income?

Despite the mixed results from the CBA survey, the literature review as well as the causality-analysis conducted during this research process suggests a number of key indicators and data that should be considered for further research. These can be assessed at two levels – the household and broader national level.

- At the **household level** the need is for the following data to quantify effects over the **long run**:
 - **Health Outcomes:**
 - i. Levels of access / proximity (travel time) to healthcare in specific housing forms
 - ii. Costs of healthcare for residents in specific housing forms
 - iii. Healthcare outcomes for residents in specific housing forms measured in respect of sick days, chronic illness etc.
 - **Education Outcomes:**
 - i. Levels of access / proximity to education
 - ii. Costs of education for residents in specific housing forms
 - iii. Drop out rates in specific housing forms
 - iv. Number of years attending education in specific housing forms
 - v. Qualifications obtained in specific housing forms
 - **Employment Outcomes:**
 - i. Levels of access / proximity to employment opportunities
 - ii. Employment outcomes for residents in specific housing forms
 - iii. Income effects resulting from changed employment outcomes
 - **Transportation Costs:**
 - i. Cost of transportation for residents in specific housing forms

- **Expenditure:**
 - i. Changes in household consumption patterns and expenditure in specific housing forms
 - ii. Costs for utilities for residents in specific housing forms
- **Crime**
 - i. Incidence and type of criminal activity in specific housing forms
 - ii. Costs of criminality for residents / households in specific housing forms in the long run such as cost of security, insurance claims, lost work days etc.
- Various control variables to be able to isolate effects from housing such as income level, educational level of parents, ethnical background etc.
- In addition to the above there is an urgent need to compile an index of key national costs in respect of a number of areas required to undertake a sound valuation in the CBA. These include:
 - Cost to provide health care per patient by facility per regional location
 - Cost of lost productivity to the economy per average sick day per employment grade per regional location
 - Cost to provide education per learner by facility per regional location
 - Cost to provide public transportation per person per kilometre per regional location
 - Cost of transport infrastructure maintenance and utilisation per kilometre per regional location
 - Cost to provide utilities / services per household per regional location
 - Costs of infrastructure maintenance per household per regional location
 - Cost of policing per square kilometre per regional location
 - Cost of criminal justice (including imprisonment) per crime type per regional location
 - Incidence of crime by type per regional location
 - Conviction rate per crime type per regional location

Assessing the National Housing Programme

In light of the CBA and other recent related research work (see Biermann), consideration should be given to the establishment of an effective formal monitoring and evaluation system that subjects all housing projects to an ongoing impact assessment in order to inform policy.

This should be extended to the development of a programme-level review which begins to understand and quantify the specific effects on household welfare of each of the current national programmes. In light of this it is recommended that **a follow-up CBA study be conducted to compare the benefits of social rental housing with private rental housing for comparable income groups**. This would address the question of the potential value to society in expanding the state subsidy of SRH versus the existing provision by the market alone.

Additional References:

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