COST BENEFIT ANALYSIS: SOCIAL RENTAL HOUSING

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Think Piece 3: Fiscal Implications

The Social Housing Foundation

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

- The direct financial costs of SRH are about two and a half times higher than RDP housing over 40 years. However, including the wider costs and benefits and looking at who actually pays, shows a different picture.
- When the economic costs and benefits of housing are included, then well-located SRH and RDP housing costs about the same. Where RDP housing is located on the periphery, SRH is of greater overall benefit.
- National government RDP capital subsidies create a substantial future cost burden for municipalities. Municipalities carry most of the financial costs of RDP housing over time, and residents pay little. This should be carefully considered, since the national housing capital subsidies that are allocated today seem to create a substantial and growing fiscal burden on municipalities in future years.
- In SRH projects, most costs are carried by residents, with only a limited cost burden created for municipalities. This is partly because the Social Housing Institutions manage the projects over time and recoup the maintenance, service and tax payments from residents through rentals.
- RDP housing requires substantial indirect government subsidisation over 40 years, whereas SRH recovers more costs from residents. SRH residents have somewhat higher incomes and can afford to pay for their costs, whereas RDP houses are more subsidised for lower income households. SRH seems more sustainable, and RDP more redistributive.
- SRH projects are planned making all future costs visible, while RDP projects do not clearly show their future costs when decisions are made about subsidy investment.
- The way risks and incentives work in RDP and SRH projects have different effects. This partly causes the greater fiscal burdens of RDP housing over time. Social Housing Institutions have more incentives to design housing well and ensure that it is well-maintained and managed, and that residents pay their way.
- From a broader policy perspective the CBA suggests that government needs to consider the *full economic costs* of its housing programme rather than focusing only on the housing subsidy. If sustainable human settlements are to be delivered the current funding parameters need to be optimised and possibly reconsidered. This must include adequate consideration for the ongoing cost burden transferred to local authorities.

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 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 fiscal implications of affordable housing programmes from the view of government and taxpayers. In particular, the paper examines issues identified by the CBA about the way housing projects are currently subsidised, and what this may mean for government and taxpayers over the long term. The study makes a strong case that CBA methodology should be used more often when decisions are made about subsidising housing programmes and projects.

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

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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 (more recently 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 Social Rental Housing 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 the resident. 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 of Social Rental Housing

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, such as the cost of building the house, and indirect ones, such as 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.

Current Housing Delivery

Since 1994, South Africa has delivered over two million RDP houses - a significant achievement. The direct subsidy cost of delivering these houses for government has now increased to about R10 billion per year – taking into account only the housing capital subsidy. It seems that poor workmanship and a range of contractor problems has resulted in many houses needing to be rebuilt. The current initial estimate is that some R2 billion will be needed over the next few years to demolish and replace or repair many RDP houses. Nearly 40,000 SRH units have been delivered in the last decade or so. The National Association of Housing Organisations (NASHO), an umbrella body for SHIs, represents approximately 30,000 units alone.

The Fiscal Considerations – what does affordable housing actually cost?

Determining what affordable housing actually costs government, taxpayers and South African society is very important for policy decisions. There are at least four reasons for this:

- Firstly, subsidising housing itself by government may create the need for subsidisation of related infrastructure, services, land and so on.
- Secondly, subsidising different forms of housing may have different impacts on how healthy, productive, secure and so on the residents become, and hence what these residents go on to cost and contribute to society.
- Thirdly, subsidising different types of housing today may have different impacts on what fiscal support is needed in future years.
- Fourthly, subsidising housing by national government may create a (future) burden for other spheres of government and for other parties in society.

The CBA helps create a clearer picture of these issues. It does this by making visible as many of the direct and indirect costs over a 40-year period, and putting this in money terms that can be added and compared. By doing a distributional analysis, it is also possible to see to which party in South African society the main costs and benefits fall.

RDP housing seems cheaper, but is it really?

The CBA first looked at the direct financial costs of SRH and RDP housing over a 40 year period. This includes constructing and maintaining the housing on land with infrastructure and services. The direct financial costs of the four projects assessed in the CBA – two RDP housing projects (Bram Fischerville and Potsdam) and two SRH projects (Roodepoort and Amalinda) – are shown on the following table.

Table 1: Costs of Building and Maintaining RDP and SRH Housing Over 40 Years (ZAR per Housing Unit)

	Bram Fischerville RDP	Roodepoort SRH	Potsdam RDP	Amalinda SRH
	R	R	R	R
Total building cost per unit	54,083	215,628	113,243	241,679
NPV building maintenance cost	13,171	12,947	5,199	20,674
NPV township services maintenance cost	27,178	7,707	27,178	7,707
NPV utilities	110,100	114,993	84,104	132,976
NPV operating costs	-	72,686	-	80,373
Economic life	20	40	20	40
NPV rebuilding costs	19,923	n/a	37,391	n/a

NPV = Net Present Value: The difference of all the costs and benefits of a project over its lifetime, in today's money terms, that can be compared. If the NPV of a project is greater than 0 (in other words, its benefits add up to more than its costs) then the project is worth investing in.

The total building costs per unit of the RDP projects reflected in the table while significantly higher than the capital subsidy, are significantly lower than those in the SRH projects. This is due to the prime positioning of SRH close to urban areas and the associated high cost of land, and higher building standards and services. RDP per unit housing costs are also lower because of the impact of economic scale efficiencies due to the higher number of units typically constructed in such projects. Because of poor construction and maintenance, RDP housing requires rebuilding after approximately 20 years (as explained below).

A concern that arises from the data is that the real costs of housing are not being adequately considered by policy makers. The data show for instance that in the case of RDP housing, their actual current construction costs (including infrastructure) are at least twice the current housing capital subsidy amount. The main development costs for RDP housing that are not covered by the capital subsidy include the value of the land (at its opportunity cost) and the bulk and link infrastructure. An additional cost burden to government also arises in respect of the rebuilding cost of RDP units that fail to achieve a reasonable economic life due to poor workmanship and lack of maintenance.

If one compares the overall NPV of the direct financial costs over 40 years (see table below), then the NPV of SRH overall is about 2,5 times higher than RDP housing in both sets of projects considered.

Table 2: NPV of Lifecycle costs (ZAR)

Project	NPV Financial (ZAR)
Bram Fischerville RDP	190,000 to 209,000 R/unit
Roodepoort SRH	387,000 to 428,000 R/unit
Potsdam RDP	206,000 to 227,000 R/unit
Amalinda SRH	443,000 to 490,000 R/unit

Based on these figures it could be concluded that SRH is about twice as costly per unit as RDP. However, a CBA enables us to get a much more complete picture of what the housing actually costs. And when we look more closely, the picture changes substantially.

Adding economic and social costs and benefits changes the picture

When the wider costs and benefits – transport, health, education, crime, etc. – that affordable housing mean for society over 40 years are included, then two significant patterns are seen (see Think Piece # 1 on Location and Density). First, where SRH and RDP housing projects are well-located in cities, their overall financial and economic costs are about the same. Second, when RDP housing is located on the periphery of cities, then SRH is more beneficial overall to society than RDP housing. Importantly, many of these wider costs (and benefits) also have direct fiscal implications. For example, higher crime levels mean the government needs to spend more on policing and justice, and if residents are healthier, then less resources are needed for clinics and hospitals, and so on.

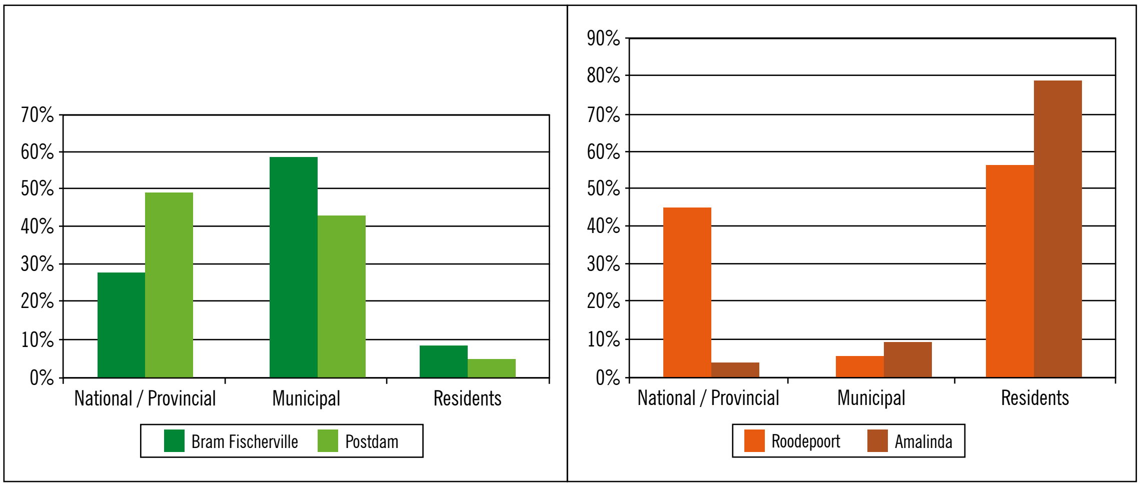
So if one takes into account both direct financial and wider social and economic costs and benefits then SRH and RDP housing costs about the same, and in some circumstances SRH provides more overall benefits.

Analysing who actually carries the costs is revealing

To get a better idea of who actually pays the costs of affordable housing the CBA included a distributional analysis. This takes each of the costs of housing and identifies whether they are paid by national/provincial government, municipalities, or residents themselves. The analysis takes into account situations in which government consciously decides to pay for something (by, for example, making a purposeful budget allocation), as well as additional costs for government that are created by subsidy spending. It also looks at the effects over time of instances in which government spending today creates the need to spend more money in the future.

On the tables below the division of financial costs of RDP and SRH over 40 years is shown between national/provincial government, municipalities and residents.

Figure 1: Distribution of 40-Year Financial Costs per Housing Unit Between Parties (%)



This distribution of costs shows several important patterns

First, in RDP housing projects, the bulk of costs over 40 years are carried by municipalities, somewhat less costs are carried by national/provincial government, while residents carry the least costs. This is because the maintenance of infrastructure and the provision of services is a major cost over 40 years in comparison to the initial construction and infrastructure costs. RDP households have very low incomes and qualify for free basic services, the cost of which is carried by municipalities (albeit partly covered by national transfers). RDP houses are also valued at such low levels that they are effectively exempted from paying property rates and the actual collection of tax or services charges (where levied) is extremely low. Municipalities have little hope of recovering these costs as the number of RDP settlements grows.

This is interesting as the national/provincial part of the costs are paid in early years (primarily through the capital subsidies for housing and infrastructure), whereas the municipal costs occur mainly over the remaining 40 year period. This illustrates that the RDP capital subsidies create substantial future costs for municipalities. These costs represent a further subsidy that must be covered by the municipalities other resources.

Second, in SRH housing projects the majority of costs are carried by the residents themselves, and the national/provincial subsidies do not create a substantial cost burden for municipalities. This is because the Social Housing Institutions which manage the SRH houses take care of maintenance, utility payments and so on for the residents, and recover these costs through the rentals paid by the residents. This seems to be more fiscally sustainable over the long term.

Third, it is very important to remember that SRH residents cover their housing costs themselves partly because they can afford to do so, as they have somewhat higher incomes than typical RDP residents. RDP houses require much more subsidisation by government (both by the explicit national subsidies, and by the unintended municipal subsidies) than SRH, however, they provide shelter for households who are significantly poorer.

How housing programmes are planned and managed makes a difference

Two other issues were seen that are also important for fiscal planning and policy decision making for affordable housing. The first concerns the question of how much information is made visible when decisions on housing subsidies are made. In the case of RDP subsidies, these are based on the pre-determined capital subsidy amounts made available – both housing and infrastructure. Limited attention is given to any additional or ongoing funding that may be needed later on as a result of the new housing development and such shortfalls default to municipalities. In the case of SRH projects, it is necessary to prepare feasibility assessments which quantify the cost to build and maintain the houses over their lifetime. It is on the basis of these costs and affordable rental targets that the subsidy needed is calculated. This is partly why SRH projects look so much more expensive when they are planned, as they make the future maintenance and servicing costs visible, while for RDP projects these costs are not seen.

The second issue is about how the risks and incentives in different housing programmes cause different effects. On the one hand, the way the RDP subsidy works, housing developers do not have long term operational or maintenance risks for houses they produce (although there is regulation and quality checking). They do not, therefore, design and build houses in a way that promotes optimal maintenance. RDP residents often do not know why it is important to regularly maintain a house, often cannot afford such maintenance, and mostly do not face penalties for non-payment of utilities or local taxes. As a result, these costs burdens default to municipalities.

On the other hand, in SRH projects the Social Housing Institution (SHI) must maintain and manage the housing over its full lifetime. They have an incentive to design and construct the housing so that it will last well and can be best maintained. This is also because the housing serves as collateral for loan finance which is used to partly fund SRH projects in many cases. The SHI pays local taxes and service charges on behalf of residents, maintains the housing for them, and recovers these costs from the residents through rentals. The SHI has an incentive to keep the residents content and paying their rentals but can also evict persistent non-payers if necessary.

The way such risk and incentive structures have effects should be closely considered when subsidies are allocated and housing programmes developed.

Fiscal Implications

The fiscal analysis undertaken in the CBA study considers the cost of RDP and SRH solely from the perspective of government and takes into account capital costs, ongoing operating costs as well as any economic costs or savings accruing to government.

Both RDP and SRH housing delivery programmes were modelled against the same assumptions: 100,000 units; 5 year phased construction (delivery of 20,000 units per annum) and a 40 year economic life. In addition an assumption was made that RDP will require a substantial refurbishment / rebuild in year 20. These costs have also been included.

The summary findings in respect of the projects analysed are indicated in the table below. It is important to note that this table **only indicates the costs paid for by government** and does not indicate the total development and operating cost. Also, the analysis is based on a forecast that utilises the specific project costs as determined by the CBA in each case. Consequently these reflect particular locations and circumstances.

Table 3: Costs incurred by Government (ZAR billions) – Roodepoort Projects

NPV *	Bram Fischerville RDP	Roodepoort SRH
Total fiscal burden (Rb)	19 to 21	18 to 20
Capital costs - National / Provincial	6 to 7	15 to 17
Capital costs - Municipal	0,5 to 0,6	-
Operating costs - Municipal	12 to 14	3 to 4
Given the nature of modeling and assumptions, findings in respect of these NPV's are always indicated as ranges.		

Evident in the table above is that in the case of the two projects considered in Roodepoort the total cost of the two projects to government over 40 years is highly comparable - some R20 billion in each instance. These costs include capital subsidies, infrastructure contributions and free basic services and other municipal service provision. Notable is the significant cost accruing to national government in respect of SRH reflecting the new social housing restructuring grant. In respect of the RDP project significant costs accrue to the municipality. Such costs include initial capital expenditure, ongoing maintenance and service delivery expenditure.

It is also important to note that while the cost to government over 40 years is similar between the two projects the product being delivered is significantly different. In respect of Bram Fischerville the product is old low-specification 30m^2 units while the Roodepoort SRH comprise 30m^2 and 40m^2 high-specification apartment units.

In the case of the Potsdam RDP and Amalinda SRH projects, the fiscal analysis indicates a substantial cost saving to government in respect of SRH over the 40 years. This is primarily attributable in this instance to the very low level of capital subsidy provided to the SRH project as well as the high cost associated with a greenfield RDP settlement.

While the findings do not merit a conclusion that one housing programme is better value-for money for government than another in all circumstances, the findings do raise important considerations for policy makers. In particular the findings suggest that peripheral greenfield developments may not represent value for money to government in view of the significant initial and long-term cost burdens they create – especially for municipalities.

Conclusion and Policy Recommendations

The CBA has provided some interesting insights into the real costs of affordable housing to government and tax payers, and to South African society more broadly. The findings suggest that the real fiscal costs of subsidising affordable housing are not often seen when subsidies are allocated. Of particular concern, it appears that the RDP housing subsidies (and especially RDP housing in peripheral locations) is creating a very substantial future burden to municipalities.

The distributional analysis found that although RDP per unit costs are lower, most costs are substantially carried over the lifecycle (i.e. in future years) by municipalities and not by residents themselves. Consequently, RDP housing requires a greater total lifecycle subsidy of residents (smaller initial direct subsidies than SRH, but larger lifecycle indirect subsidies) than SRH.

From the perspective of government the CBA suggests that much more consideration needs to be given to the costs of other infrastructure – specifically social infrastructure such as healthcare and education – as well as transportation. Greenfield RDP projects require the development of these types of infrastructure. Current experience indicates that such development is often significantly delayed largely due to fiscal constraints. SRH is better able to use existing infrastructure because it is typically located in existing urban areas. This is, however, reflected in significantly higher land costs.

SRH also requires residents with sufficient income to pay for lifecycle costs. RDP housing can accommodate lower income groups because of its higher indirect lifecycle subsidy. The redistributive nature of RDP means that this program can target the poorest of the poor while SRH is targeted at an income group that can pay some level of rental in line with their housing choice. From a policy perspective RDP can be considered more redistributive, while SRH is more fiscally sustainable.

The overall policy considerations that are suggested by this analysis are related to the overall subsidy regime and consideration of new / alterative subsidy instruments, the need for better project-level value-for-money assessments and proper consideration of the real cost of housing delivery.

A debate is required about other subsidy options that would support the extension of SRH-type delivery to poorer households. There may be an opportunity to achieve the locational and institutional advantages of SRH in a way that can target households with lower incomes but still be more financial sustainable. This of course requires that an effective payments culture is established and enforced.

The CBA suggests that projects can be optimised using the insights from the specific financial and economic costs and benefits caused by the project. In short, national housing delivery would achieve better value-for-money if proper project level assessments (cost-benefit analyses) were undertaken to ensure the optimal location and typology. However, such project level assessments need to be accompanied by a better understanding and recognition of the key cost variables including the economic opportunity cost of the land as well as the bulk and related infrastructure costs. This will require a reassessment of the overall conditional grant framework if sustainable human settlements are to be delivered.