SHELTER AID FOR ELDERLY RENTERS:
A PROGRAM EVALUATION FROM A COMMUNITY PERSPECTIVE

by

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Abstract

This study examines BC Housing's Shelter Aid for Elderly Renters (SAFER) program from a community perspective. SAFER is a subsidy to elderly low-income renters. The purpose of the paper is to examine inequities in the distribution of SAFER benefits. The study aggregates individual-level SAFER and census data into community-level data and performs a linear regression analysis using two dependent variables. The most important finding to emerge from the analysis of the community data is that SAFER is an effective and well targeted program that provides benefits to the most needy; there is no evidence of income or rent-based inequality. However, communities that experience high mobility from outside the community have lower SAFER take-up rates. Finally, communities with low rental unit availability have high SAFER take-up rates. The study suggests that BC Housing simplify the SAFER application form, develop an on-line application process, and examine a long-term plan to address BC's rental housing shortage problem.

Executive Summary

Shelter Aid for Elderly Renters (SAFER) is a shelter allowance program provided by British Columbia's housing agency, BC Housing. The program provides a monthly income subsidy to senior-age renters for whom rental costs are a high percentage of income. One program characteristic has been repeatedly identified in the literature as having the potential to cause problems with respect to the equitable per capita distribution of program benefits across communities. SAFER's maximum rent and income levels have not kept up with increases in federal Old Age Security benefits or the cost of living. As a result, the benefit is decreasing in value in communities which have experienced high cost-of-living increases. Furthermore, despite significant differences in average rents, maximum rent levels allowed in the subsidy calculation are the same across all communities in British Columbia. This is important because an individual living in a high-rent community may be receiving less of a subsidy (in proportion to their rent-to-income ratio) as a result of the maximum rent level cut-off than someone in a lower-rent community.

This study examines the SAFER program for evidence of inequity of program distribution across communities using SAFER casefile data from 1996 and 2001. The casefile data is aggregated into communities and compared with census data from the same years. This technique allows a statistical comparison of a broad range of variables to identify whether SAFER's distribution across communities is equitable, and if not, what is causing an inequitable distribution. A number of experimental and control variables are tested in the study. These include demographic variables, shelter and rent-related variables, income and need variables, and mobility variables. The variables which relate to the problem identified in the literature are in the income and shelter groupings.

The statistical analysis in this study revealed evidence that SAFER is working very well in many respects. This is the most important finding of the study. According to this analysis, SAFER is distributing benefits across communities with a disproportionate amount going towards communities with lower average incomes, as should be expected. There are no major sources of

inequity in the distribution of the subsidy across communities. SAFER is a necessary and important part of the spectrum of BC Housing's programming, and although it may deserve a review with respect to the problems and solutions presented above, it should certainly not be terminated.

The data analysis did suggest two areas where further analysis is needed. First, mobility into the community is associated with lower rates of SAFER take-up as well as lower average benefits per community. Communities with high internal mobility (individuals moving within the community) experience the opposite effect; they have higher rates of SAFER take-up. Following an analysis of alternatives aimed at reducing the gap in benefits and take-up rates between high and low external-mobility communities, this study suggests that:

1. BC Housing re-evaluate the SAFER application form to reduce its complexity and allow seniors with low education to successfully apply to SAFER.

2. BC Housing design an on-line application process for the long-term simplification of the application and information update system.

The second area where study is needed, according to this data, is with respect to rental units. The statistical analysis shows a strong correlation between SAFER take-up and low rental unit availability. Communities without many rental units, as a percent of the total and as a per-capita measure, have lower rates of SAFER take-up, with all other variables controlled for. Although an analysis of this problem with a view towards finding solutions is extremely complex and beyond the scope of this study, the analysis does find that this problem generally is concentrated in isolated and rural communities. This study recommends that BC Housing pursue the development of a strategy to ensure some minimal level of rental unit availability, as a percentage of total units, in communities below a given average income threshold.

Dedication

To Eamonn, my roommate, for keeping it real and keeping me relaxed this year, or at least as relaxed as possible.

Acknowledgements

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1 Introduction

BC Housing, British Columbia's crown corporation responsible for housing, operates a program
known as Shelter Aid for Elderly Renters (SAFER). SAFER is intended to increase the housing
security of senior-aged individuals who rent accommodation. The program has been operational
since 1976, and over ten thousand seniors take advantage on an annual basis. While there have
been reviews and reports of BC Housing's operations generally, as well as statistical analyses of
similar shelter subsidy programs, nothing has been written specifically on SAFER since 1993,
when Marion Steele did a comparison of housing allowance programs, using BC's SAFER
program as one of two case studies (Steele, 1993). Further, since SAFER began operating, no
study has examined whether differences in external variables in BC's communities have any
impact on the ability to take advantage of the benefits offered by SAFER. BC has a very diverse
network of communities, with huge differences in socio-economic and demographic realities.
Some of SAFER's provisions with respect to eligibility for and calculation of the shelter subsidy
depend on factors which are in turn dependent on variables in the community. The purpose of this
paper is to examine potential community factors that may result in inequity in program
distribution across BC's communities.

This policy study provides an evaluation of the levels of SAFER participation across different
communities in BC, and provides some insight into the communities that SAFER is benefiting the
most. Using data obtained from Canada Census materials and BC Housing's SAFER database, it
helps to determine how SAFER meets the need it was designed to meet, and places SAFER in the
spectrum of housing security programs offered by BC Housing.

The study begins in section 2 by describing some characteristics of the SAFER program. It does
so by examining the provisions of the program, its history, and descriptive statistics of current
and past recipients. Section 3 sets out the parameters and describes the methodology for the
statistical analysis of SAFER recipients by community. It also sets up the definition of the
problem and describes the dependent variables used to test for inequity across communities. The
next section, section 4, defines the independent variables that may contribute to variations in

SAFER take-up and benefit rates across communities in British Columbia. This section defines the relevant hypotheses used in the study. The methodology for the data analysis is described, and the major hypotheses are examined.

Section 5 presents the results of the data analysis and describes the inferences suggested by the data. It points to the most significant variables from the data analysis that affect the distribution of SAFER take-up rates across BC communities, and provides an analysis of the reasons that these relationships are significant. Finally, section 6 builds from the analytical findings to present some potential alternatives that may help mitigate some of the statistically significant inequity relationships found in the study.

2 Background

2.1 Program History

Housing security is a concern in all Canadian provinces, but perhaps none more so than in British Columbia. BC's economy has grown rapidly, and the corresponding increase in population has put significant pressure on housing markets. Rents in Greater Vancouver, where over 50% of BC's citizens live, are the second highest in Canada. Increases in rent without a corresponding increase in income have moved many families and individuals into an unstable housing situation, leaving them at risk of becoming homeless.[1] A 2001 study estimated that, in 1996, 24% of households in British Columbia were paying more than 50% of their income as rent, an increase of 6% over 1991. Vancouver, which also had an at-risk figure of 24%, had the highest such rate in Canada (Eberle, Kraus, Pomeroy & Hulchanski, 2001, p.6). Seniors in British Columbia are a group that is particularly at risk of becoming homeless. Senior citizens are more likely to be on low or fixed incomes, leaving them vulnerable to increases in rental costs. Senior citizens are also less mobile than other groups, making them less able to search for lower rents (Hurford, 2002, p.12).

Prior to the 1970s, housing programs were oriented around supply-side solutions; the strategy was to increase the supply of housing through construction subsidies or the provision of public housing. These programs involve large initial capital investments and are limited with respect to the amount of people they can support[2] (Howenstine, 1986, p.135). As proponents note, however, housing construction options become cheaper over time, relative to private market subsidies, as mortgages are paid off. As early as 1969, a Canadian report, the Hellyer Housing Task Force Report, expressed a preference for demand subsidies (White, 1981, p.7).

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[1] Because there are no firm counts of the number of homeless people in Canada or BC, a statistic often used to describe homelessness is of being 'at-risk of being homeless'. This refers to households who spend over 50% of their rent on income, those who live in rooming houses, single-room occupancy hotels, motel rooms, or those who 'couch-surf'.

[2] "In a comparable cost comparison of U.S. housing subsidy programs, Mayo found that from two to three times as many households could be served per dollar expenditure on housing allowances as could be served by either public housing programs or by the section 236 producer housing subsidy program." (Howenstine, 1986, p.135)

In 1976, the government of BC initiated a program designed to address the problem of housing insecurity among senior citizens. SAFER is a shelter allowance program provided by British Columbia's crown corporation responsible for housing, BC Housing. When the SAFER program was initiated, it became Canada's first demand-side housing program for seniors (BC Housing Management Commission, 1986, p.13). The demand-side approach to housing marked "a new direction in Canadian housing policy" (Steele, 1995, p.1). Most Canadian provinces have since copied that 'new direction' and, almost 30 years later, SAFER is operating with only minor changes from its initial inception. One conclusion from this rare stability is that the program is well designed. However, stability in both take-up rates and benefit levels does not necessarily indicate a successful program. If the population of elderly people in BC is growing and if costs of living are increasing, program enrolment should also increase proportionately. That it has not does not necessarily imply that SAFER take-up rates are low – that is a normative conclusion indicating that SAFER registration has some optimal or pre-determined level. What it could mean is that fewer seniors are in housing need, or that SAFER's eligibility formulas are excluding seniors who are still in need of the subsidy, or that the subsidy is so small relative to other costs that it is no longer worth the time to fill out the application form. These, not normative questions around the correct level of take-up, are the types of questions that are asked throughout the study.

2.1.1   Participation in SAFER

Participation in SAFER since the program's inception has been a topic of discussion in several studies and reports. In 1986, Doyle mentioned declining take-up rates since program inception (Doyle, 1986, p.7). In 1993, Steele noted declining take-up rates over time (Steele, 1993, p. 24). Again, in 2003, the BC Housing service plan for 2004/05 noted declining take-up (BC Housing, Service Plan, 2004). Each study noted the declining participation rates as a concern, and mentioned that it would be desirable to increase take-up. This conclusion came from a general impression that there was a significant eligible population who was not receiving SAFER.

Take-up rates at program inception were less than anticipated. In the SAFER proposal of 1976, the estimate of eligible households living in private rental housing, with rents at between 40% and 50% of incomes, was 26,000 (British Columbia Department of Housing, 1976, p.2). The first year of the program's operation had a take-up of 16,290 in its initial months, but enrolment decreased shortly thereafter to 13,733. The Ministry of Human Resources attributed the decrease to a failure of individuals to re-apply and a stabilization of rents. In 1986, with participant households at

9,384, MHR explained the falling take-up rate by citing an increase in pension benefits resulting in a loss of eligibility for SAFER and reduced core housing need (Doyle, 1986, p.7).

Table 1: SAFER Take-up rates, 1978-2002

Year	# of Recipients
1978	15,000
1979	13,500
1980	12,500
1981	11,363
1982	10,640
1983	10,020
1984	9,962
1985	9,432
1986	9,384
1987	8,997
1988	8,436
1989	7,722
1990	9,595
1991	10,808
1992	11,439
1993	11,732
1994	11,828
1995	....
1996	+/-13,000
1997	12,500
1998	12,482
1999	12,310
2000	12,221
2001	12,083
2002	11,883

Data sources: Years 1978-1985: Doyle, 1986, p.7. Years 1986-1994: Steele, 1995, p.10. Years 1996-2003: BC Housing, Annual Reports. Data from 1995 is not available due to administrative re-organization and 1996 is an estimate, as the program was housed in the Ministry of Human Resources.

Another commission cited less than anticipated take-up rates that stemmed "in part, from administrative procedures which require yearly application" (BC Housing, 1999, p.7). In 1993, Steele noted that lack of participation was likely due to misunderstanding and problems completing the application form (Steele, 1995, p.28). In 2000, BC Housing noted that they had implemented a communications plan to increase the level of awareness and participation in SAFER (BC Housing, 2001, p.46). In 2001-02, the BC Housing Annual Report cited decreasing enrolment because of "changes in circumstances and eligibility" (BC Housing, 2002, p.22).

The year 1990 saw a large increase in SAFER take-up. This is likely due to responsibility for SAFER being transferred from BC's Ministry of Human Resources to BC Housing; marketing

and greater public awareness as a result of the association with BC Housing explain the jump (Copas, 2005).

This section focuses on participation rates over time in the SAFER program. However, as noted above, the intention of this section is not to suggest that participation rates are too low, but only that they are low relative to a previous enrolment. Changes in the size of the subsidy relative to an individual's income may at the margin be influencing the choice of whether to participate in the program. This study is not implying that take-up rates are too low. In order to do that, one would have to construct a model to determine expected (or base-line) SAFER take-up rates in communities, according to given socio-economic characteristics, and then compare the expected result to the actual result. This study does not attempt that.

2.1.2 SAFER Benefit Levels

Throughout SAFER's history, benefit levels have been unrelated to indicators of economic growth. Increases to the maximum allowable calculable rent are not tied to increases in the Consumer Price Index, inflation, private rental market prices in BC, or increases in the OAS/GIS supplements. Changes to the SAFER maximum allowable rent levels have been sporadic since 1977. The following table presents the maximum SAFER rent levels in selected years since program inception, as well as the mean rent levels of a one-bedroom unit in Vancouver in 1993 and 2003. Maximum allowable rents have not changed since 1991, while rent levels in Vancouver have increased by $191.[3] During that same period OAS benefits, which are adjusted for CPI, increased by 19%.

Table 2: Maximum eligible program rents vs .rent and income indicators, 1977-2003

Year	Maximum Rent Level, Single Recipient	Average Rent, Vancouver, 1 bedroom	OAS Supplement (tied to CPI)
1977	$175		
1980	$225		
1982	$330		
1986	$330		
1992	$520		$378.19
1993	$520	$568	
2002	$520		$449.32
2003	$520	$759	

Data Sources: Doyle, 1986, p.7; Steele, 1995, p.22;Canada Mortgage and Housing Corporation, 2003; Government of Canada, 2004.

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[3] The average rent for a one-bedroom apartment in Abbotsford in 2003 was $537, and in Victoria $619.

The significant result of the failure to peg maximum allowable rents to other cost-of-living indicators is that the subsidy, as it gets smaller relative to the cost of living, covers a smaller percent of the rent-to-income gap SAFER is designed to bridge. Recipients who are paying more than the annual allowable rent will never achieve a rent-to-income ratio of 30%[4] (Doyle, 1986, p.7). As a result, SAFER recipients in communities with higher rents and higher costs of living could be receiving inequitable treatment from the SAFER program, as it cannot make up the same difference in their income gap as seniors in other communities.

2.2 Characteristics of SAFER program

2.2.1 Program Objectives

SAFER is intended to address a number of policy objectives and to fill a section of the continuum of housing security programs offered by the government of BC. Publications from BC Housing do not present any explicit goals or expectations of the SAFER program. Following some significant literature review, the following are some objectives which have been attributed to SAFER and other very similar programs:

- Provide flexible housing options to elderly renters (BC Department of Housing, 1976, p. 8).
- Provide assistance in a least-cost manner to seniors (Doyle, 1986, p.6).
- Induce elderly tenants to live in housing that meets minimum standards (de Leeuw, F., Leaman, S.H. & Blank, H., 1970, p.8).
- Decrease the reliance on construction of new public housing stock
- Help low-income senior citizens (Steele, 1995, p. 4).
- Maintain the independence of capable, elderly seniors

2.2.2 Eligibility

SAFER targets low-income individuals by placing maximum ceilings on income and eligible rent. If an individual's rent is higher than the amount shown in the table below, he or she remains eligible to receive the subsidy, but the subsidy they receive is based on the maximum rental

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[4] "We know that fewer people are applying for SAFER each year and that SAFER ceilings are not rising as fast as either rents or pensions. In fact, they are not rising at all. Any increase of government indexed pensions reduces the amount of the SAFER benefit. In real terms the benefits to those individuals who have been served by SAFER have remained virtually the same on average for the period under discussion while rents rose by 63% to 79% in the urban areas where a majority of BC's senior's live." (Doyle, 1986, p.7)

amount allowed in the table below, rather than the rent they actually pay. Because the benefit is a percent-of-rent calculation, individuals with sufficient income that their rent is less than 30% of their income do not qualify for the program; they are not considered to be in core housing need.

Table 3: Maximum rents and incomes for SAFER eligibility

Housing Unit	Maximum rent allowed in calculation (monthly)	Maximum gross income (monthly)
Single	$520	$1733
Couple	$575	$1918
Shared unit	$885 (divided by number of adults who share the home)	$1470

Data Source: BC Housing, Rent Supplements.
http://www.bchousing.org/Applicants/Rent_Supplements.asp#T2

A second important component of eligibility is age; SAFER is targeted at seniors over 60. If the senior is over age 65, he or she must also be eligible for the OAS supplement. If the senior is between 60 and 64, they must be either a Canadian citizen or a Landed Immigrant, have lived in BC for a year, and have lived in Canada for more than 10 years in order to qualify (the same standards apply for seniors over 65). Individuals who are receiving Income Assistance are ineligible.

2.2.3   Shelter-to-Income Ratio (SIR)

Also known as the rent-and-income-conditioned (RIC) program, the shelter-to-income ratio is the key design feature of the SAFER program. The SIR tool establishes a percentage that it sets as the 'target' percentage of gross monthly income tenants should be paying towards rent. Tenants receive a percentage of the difference between the percentage of income that actually goes towards rent and the target ratio. The SAFER program sets the target rent-to-income ratio at 30% and subsidizes a percentage of the difference between the rent-to-income ratio and the target ratio (Steele, 1995, p.17, Howenstine, 1986, pp. 71-95.). The percentage of the difference subsidized varies according to income; it is 90% for the lowest income brackets and falls gradually to 44% for the highest income brackets.

2.2.4 Payment Method

The subsidy is awarded through a monthly cheque or direct deposit issue. The subsidy is cash and is awarded directly to renters as opposed to landlords. The payment method raises a number of interesting economic issues around program effectiveness. One common criticism of a subsidy is that it does nothing to increase the quality of housing; many argue that a direct cash transfer of this sort does not increase spending on housing, but that the increased income is spent instead on other goods (Friedman & Weinberg, 1982, p.132, de Leeuw, F., Leaman, S.H. & Blank, H., 1970, p.8). However, this type of payment method avoids any social stigma attached to the receipt of an income subsidy (Steele, 1995, p.24, 29). Recipients receiving SAFER must reapply for the benefit each year, and therefore must complete the application form on an annual basis.

2.2.5 Reliance on private market

Individuals taking advantage of SAFER must live in private rental units; co-operative, public or other subsidized housing does not qualify for SAFER benefits. One impact of this dependence on private rental markets is that the program's subsidy calculation formulas become dependent on trends in the housing market. Actual rent paid is an important component of the subsidy calculation; individuals living in areas with low rental unit availability or high rental rates are closer to the maximum rent cut-off (see section 2.2.2) and therefore receive less than the full subsidy that might otherwise be available to them. While dependence on the private market results in significant flexibility with respect to choice of housing quality and location, it also makes the program dependent on a well-functioning rental housing market in communities across BC. SAFER recipients in communities without this well-functioning market may experience some inequity in benefits relative to other communities with effective rental markets. For example, communities with fewer rental units or high rental costs may see more SAFER recipients than other communities with a greater supply, or less demand, for rental units.

2.3   SAFER Background Statistics

This section describes the population and type of benefits received by current SAFER recipients. In September of 2004, there were 11,990 individuals receiving the benefit. Of these, 11,217 (93.5%) were single recipients. 475 (4%) of SAFER files were couples. 298 SAFER files (2.5%) were classified as sharers.

The maximum rent ceiling for SAFER singles is $520, for couples $575, and for sharers $885. Although clients are still eligible to apply for the benefit if their rent is over the limit, the subsidy is only calculated based on those rent levels. In September of 2004, 26.21% of single recipients had rents below the $520 maximum, only 1.01% of couples receiving SAFER were paying rents below their $575 limit, and 89.68% of sharers were paying rent below the $885 maximum rent limit set for them. Average monthly subsides were $110.56 for singles, $64.28 for couples, and $72.18 for sharers.

The average subsidy for all categories of the SAFER program is $112.23. The total amount of SAFER paid out in September of 2004 was $1.34 million. During the month of September, 213 applications to receive the subsidy were sent to BC Housing. Of these, 54 were approved, 5 rejected, and 154 were 'pending/not started.'

Table 4: Statistical profile of SAFER, September 2004

Type	Caseload size	Average subsidy	Maximum rent ceiling	% paying rent at or below the ceiling
Singles	11,217	$110.56	$520	26.21%
Couples	475	$64.28	$575	1.01%
Sharers	298	$72.18	$885	89.68%
Total	11,990	$107.77		

The following table indicates the number of communities used as cases in the regression analysis. The number of missing cases (629 of 955, or 65.9%) indicates the number of census sub-divisions that had no SAFER recipients, and therefore no data for any SAFER-specific measures. There were more communities with SAFER recipients in 2001 than 1996, 55% (180) as opposed to 45% (146).

Table 5: Frequency of Year Variable for Dataset

		Number of Cases	Percent of Cases	Valid Percent of Cases
Valid Cases	1996	146	15.3	44.8
	2001	180	18.8	55.2
	Total	326	34.1	100.0
Missing		629	65.9	
Total		955	100.0	

Indian reserves are included in the total number of cases; however, there are no SAFER recipients living on Indian reserves. The following table helps to describe some of the characteristics of the sample with respect to common demographic indicators. An initial observation from this data

table is the mean monthly incomes of SAFER recipients relative to the mean monthly incomes of all SAFER recipients. SAFER recipients have substantially lower average monthly incomes than the average income of those 65 and over. A second important observation is the mean rent paid by SAFER recipients; at $517, the average rent is only $3 below the maximum rent cut-off level, which is the maximum rent level at which the subsidy is calculated.

Table 6: Socio-economic indicators of communities in dataset

	Range	Minimum	Maximum	Mean	Standard Deviation
Average age	33.00	64.00	97.00	80.2127	5.11293
Monthly income of SAFER recipients	1357.00	445.00	1802.00	1163.4428	114.10994
Average monthly incomes of 65 and over	3461.67	943.92	4405.58	1813.2484	407.08742
Rent paid by SAFER recipients	510.00	290.00	800.00	517.9871	84.45719
Average rent per community	1232.00	250.00	1482.00	625.2704	145.71703
Government transfers as a % of Income	40.6	2.1	42.7	15.192	6.0144
% with English not mother tongue	.55	.01	.56	.1342	.07860

The average rent per community take into account all rental units, while the SAFER rent figure is only for 1-bedroom apartments.

The following section describes the study's purpose, methodology, and dependent variables.

3 Purpose and Methodology

3.1 Study Purpose and Dependent Variables

This study examines the characteristics of the communities that receive SAFER benefits. The purpose of the study is to evaluate whether differences in BC's communities result in different levels of program effectiveness and equity. The community level was chosen because it is possible to gather a wide range of data from census and the SAFER database. The community in this study is defined as the census subdivisions used by Statistics Canada, using the 2001 census as the base year. Two points in time were analyzed- January 1st, 1996 and January 1st, 2001. The purpose of using two points in time was to increase the number of data points and to control for changes over time. These data points correspond with the census years of 1996 and 2001.

At this early stage, it is important to emphasize the purpose of the alternatives. The type of analysis performed in this study can only shed light on unevenness in the distribution of benefits across communities. This analysis does not allow for any judgment of whether there are 'too few' or 'too many' individuals receiving SAFER – the answer to this type of question depends on a normative evaluation of the level of subsidy this population deserves. When this analysis finds evidence that communities with specific characteristics are underserved by the SAFER program, the intention is that they are underserved with respect to other communities in a similar socio-economic situation, and are demonstrating evidence of horizontal inequity. The alternatives developed following the statistical analysis, therefore, are aimed at reducing that gap. Clearly, high-income seniors have no need for SAFER, and thus communities with many high-income seniors, and few poor seniors, should not be receiving 'more' SAFER simply because they have low rates of take-up. It is important to remember that SAFER addresses the problem of housing insecurity; consequently, if the problem becomes less severe, the expected result is fewer SAFER recipients.

The study asks two related questions. They are intended to draw out any potential inequities in the distribution of program benefits across communities. The questions are the following:

Why do some BC communities have higher rates of (per-capita) take-up for BC's SAFER program than other communities?

Why do some BC communities receive more in per-capita SAFER benefits than other communities?

The first question asks simply what the differences are in per-capita *registration* in the SAFER program across BC. This is the study's primary measure of inequity in distribution across communities. It is useful in that it answers questions relating to awareness and eligibility in different communities. The second question is slightly more involved; it asks what the differences are in per-capita *benefits* received. The second question is able to measure the impacts of different variables, such as average incomes and average rents, to a greater degree and with greater depth than the first question. However, the benefit variable must be carefully considered. Communities receiving higher average benefits could represent communities with greater need (i.e., lower income and higher rent statistics). If this is the case, then communities with higher average benefits should be correlated with higher take-up rates. However, communities with lower average benefit levels but high rates of take-up could point to several contradictory conclusions. One might be that these communities simply have a number of individuals with less of a need than other communities, as a result of higher average income statistics. Another conclusion might be that the maximum rent cut-off described in the previous section is limiting the amount of benefit SAFER recipients are able to access. This cut-off limits the subsidy's ability to make up the difference between rent and 30% of income. In this instance, low average benefits might indicate increased need. Therefore, the benefit variable can point in two different directions, and so is of use only with careful examination. As a result, the take-up measure is used as the primary measure in the study. Both questions allow for tests of inequity (as measured by take-up and benefits) across communities.

The per-capita number of SAFER recipients is calculated by taking the number of SAFER recipients per community (given by BC Housing data) and dividing that by the number of individuals over 60 in the community. This gives a per-capita measure of the number of SAFER recipients per age-eligible population. In principle, the take-up rate of the program should measure the number of eligible individuals who are receiving the subsidy – thus the denominator should not be 'age-eligible' individuals, but rather individuals who are eligible according to the criteria identified in section 2.2.2. However, data on the eligible population was unavailable for the study; as result, the number of age-eligible people is the denominator used to assess take-up.

Clearly, the take-up rate using this measure as the denominator is a significantly different measure than that using the SAFER criteria of eligibility. Many more conclusions could be drawn from a finding with this variable than the more limited, and more useful, range of conclusions which could be drawn under a typical take-up variable. This is an important limitation of the analysis.

Per-capita SAFER benefits are calculated by summing the benefits received by all recipients in the community, and dividing that by the number of age-eligible individuals. Testing benefits as well as take-up rates allows a deeper understanding of the variation of benefits among recipients; however, as noted above, careful attention must be paid to the meaning of the results of this variable, because communities with many recipients but small average benefits could indicate several different conclusions.

Both of these dependent variables are tested against the range of independent variables in section 4. The independent variables which result in the largest change in the dependent variable are further analyzed as potential policy alternatives.

3.2   Data Sources

Data for this study was taken from three sources. The first source is Statistics Canada Census data, for the 1996 and 2001 censuses. Refer to Appendix C for the full census reference tables. The second data source is BC Housing. BC Housing provided two data runs, from January 1st, 1996 and January 1st, 2001.[5] This data was provided at the individual level; the run collected data from every SAFER case file at that period. Following the removal of certain cases to standardize the dataset, there were 11,820 files for the 1996 dataset and 11,414 cases for the 2001 dataset. The third data source included a significant literature review, with research into the design of shelter subsidy programs and background research to justify the hypotheses.

3.3   Methodology

This study included a number of methodological approaches. The discussion is divided into data input methods, statistical methods, and analytical approaches.

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[5] The author is greatly indebted to Lorraine Copas of BC Housing for providing the SAFER casefile data.

3.3.1 Data Input Methods and Limitations

As described in the previous section, two types of data were aggregated to form the statistical data set. This necessitated several data manipulation approaches to align the two data sources to allow for statistical comparisons. The first manipulation involved reducing the individual-level SAFER data to the community level. This involved taking the averages of the variables for each community noted by the SAFER recipients in their applications. The next step involved merging this reporting with the community data at the Census Sub-Division (CSD) level. The details of this operation are outlined in Appendix B. The process of data aggregation results in the loss of some data richness as a result of using the statistical mean tool to bring individual-level data to the community level. The census tool involves variables that use a similar process.

Once the two data tables were successfully merged, descriptive statistics were analyzed to find outliers and typing errors. Where possible, these were recognized and adjusted for or corrected. See Appendix C for details with respect to data problems. The overall number of cases as a result of the data-merging and error adjustments was 955. However, the number of cases computed for the regression analysis is 318. The difference is a result of the two datasets these statistics were derived from. The majority of the census sub-divisions have no SAFER recipients; some percentage of this is a result of Indian reserves being included in the census calculation, and some of this is the result of small population sizes in these subdivisions. Using all of these subdivisions in the regression would have resulted in significant error, because such a large portion of them have no recipients, As a result, these communities were not entered into the regression model. There is some error as a result of this decision; this makes it impossible for the model to test whether some communities that have no SAFER recipients should, all other things considered, have SAFER recipients. However, as noted above, the purpose of the study is not to identify which communities should be receiving more SAFER benefits; the purpose is to identify, in the communities where SAFER is being received, what community indicators impact the number of recipients and the amount of the subsidy.

The manipulations made to the data in order to perform the statistical analysis are significant. However, the data is still representative of the larger sample. There are two reasons this is the case. First, as described in Appendix C, the removal of non-single applicants does not change the percentage of applicants significantly, and was necessary to make the rental rate variable useful. Second, the data began at the 100% sample level- the initial data the aggregations were performed

on included the entire SAFER population. As a result, any aggregations or reductions were performed on a base of the entire population.

3.3.2 Statistical Methods

As described previously, the study merges complete SAFER data from 1996 and 2001 with corresponding-year census data to provide a comprehensive picture of the SAFER program at the community level. The statistical method used to examine the data and analyze the results is multiple regression analysis. This study uses the forced entry method of multiple linear regression. This method enters all the independent variables into the model without prioritizing the order in which the variables are entered (Field, 200, p.119). Variables that had statistical problems, such as multi-collinearity, were removed from the analysis; see Appendix C for details. All other variables were retained, and the model was run a second time. The variables that were significant at the 95% confidence interval were then examined for strength of relationship (co-efficient) between it and the dependent variable.

3.3.3 Analytical Approaches

The statistical test identifies the independent variables that have the most impact on the dependent variable. Once these are identified, it is possible to identify which variables are 'control' or 'expected' variables (i.e., which variables indicate the SAFER program is working as intended), and which variables are experimental. This paper discusses experimental variables with a view towards refining the SAFER program in such a way as to better meet its program objectives. If the variables are rigorous and meaningful, they pass the test and move to the next step, as 'policy alternatives'. Each alternative is then subjected to a test involving feasibility criteria. Alternatives that are successful in meeting these criteria become policy recommendations.

3.3.4 Limitations and Error Analysis

As has been mentioned throughout the paper, this study is subject to considerable limitations with respect to data availability. As well, the methodology used to conduct the statistical analysis limits the ability of the findings to make meaningful conclusions. The major methodological and data limitations are noted below.

- **Cross-sectional analysis:** Data availability limited the study to a cross-sectional rather than a time-series analysis. A time-series analysis would have permitted a test for several different and potentially more significant SAFER impacts, such as the decreasing enrollment rates.

Some of the problems identified in the literature review, including the failure to index maximum rent cutoff levels (Steele, 1993, p.12, Duvall & Audain, 1992, p. 65), require an analysis of variables changing over time in order to determine the impact of changes to SAFER's eligibility formulas. This study does use two points in time, but does not perform any time-series tests; it simply uses the two points in time to collect more data points and to avoid any bias in a one-year static sample. Because that data was unavailable, this study is focused on the distribution across communities in BC rather than across time.

- **Community-level analysis:** In order to bring the two separate datasets (census data and SAFER casefile data) together, the SAFER individual-level files had to be aggregated to the community level. The individual level data was reduced to the community by taking the statistical means of the individual data for each community. Although this does provide an accurate picture of the averages for the community, it does not measure the variance, or range of distribution, in the community. The statistical mean technique assumes that the variance is the same across all units; this is certainly not the case, particularly in British Columbia. As a result, the mean technique may be misleading, as the dispersion within the community could be a significant determining factor in program take-up.

- **Take-up dependent variable:** As mentioned in section 3.1, the calculation used for the dependent variable measuring take-up is not the commonly used measure of program take-up, which measures the number of recipients against the number of eligible recipients. Data limited this measure to comparing the number of recipients with the number of age-eligible recipients. As discussed, this limits the conclusions the study is able to make.

- **Variable meanings:** The variables used in the study are of three different general types. One of the types of variables measures only the SAFER population. The second type of variables are measures of the age-eligible, or over 65, population in the community. The third type of variable measures the entire community. This last type is derived from census data, which often provides only one figure across communities. The default type of variable is the third one. Unless the variable mentions that it measures SAFER recipients only or the over-65 population only, the variable measures the entire population of the community. For example, the variable measuring government transfer payments as a percentage of income measures government transfer payments for the whole community.

- **Community comparisons:** One important methodological assumption in the study is that it is possible to test for inequity in distribution across communities by comparing one community with another community, or group of communities, with similar socio-economic backgrounds. This is not necessarily the case. This study took that approach in order to

highlight differences across communities and to ask why these differences existed. A study trying to identify specific communities receiving benefits above or below the average could use this dataset to establish a base-line measure of expected program take-up and benefit rates, per community and adjusted for socio-economic characteristics. This model could then be used to discover which communities have fewer than expected SAFER recipients, which might in turn allow a different, more in-depth analysis of SAFER's effects.

- **Assumed homogeneity:** A second methodological assumption is that the communities in the dataset are homogenous outside of the variables that are included in the analysis. The analysis reviews significant literature to attempt to draw out the major reasons for variation in SAFER take-up and benefit rates across time. However, the study cannot control for or anticipate the entire set of variables that impact SAFER take-up or average benefits. Therefore, the assumption in the study is that the only variables which affect the rate of change of the dependent variable are the ones included in the statistical analysis. The model strength of the benefit variable suggests that a significant amount of the change of that variable has been captured in the model; however, the relatively low strength of the take-up variable is evidence that there are several other variables which impact on SAFER take-up rates.

4   Independent Variables and Literature Review

Each group of independent variables is presented in the following section. The rationale and supporting literature, where available, for the inclusion of each variable is discussed. Each group of variables includes a hypothesis with respect to the impact it is expected to have on the dependent variable.

The majority of the variables discussed below are based on a percentage of the population eligible, by age, to receive SAFER benefits. There are four categories of variables; demographic, shelter-related, income and need, and mobility.

4.1   Demographic Variables

This is a group of five variables designed to test whether population size, average age, and language barriers have any significant effect on the distribution of SAFER across communities.

There are three measures of population. The first is a raw population count of the number of residents in the community. The second is a measure of the age-eligible population as a percentage of the community, and the third is a raw count of the number of age-eligible individuals per community (not standardized for the size of the community.) The variables are designed to test the idea of a 'critical mass' –whether the presence of a large percentage of seniors in the population changes the percentage of age-eligible seniors receiving the benefit. It is also designed to be a proxy measure for remoteness of communities, substituting population size for level of remoteness. The hypothesis is that smaller population sizes will have fewer standardized SAFER recipients as well as benefits. The evidence supporting the hypothesis that remote communities receive poor program delivery is widespread in health care delivery literature (Fuller, 2000, p.18; Government of BC Ministry of Health Services; Hanlon & Halseth 2005, p.12). SAFER is a subsidy rather than a 'human' service like health care; however, similar challenges apply.

A second demographic variable is the average age of SAFER recipients, by community. This is a control variable. The hypothesis is that communities with younger seniors, on average, will have lower rates of take-up than communities with older seniors, as a result of the higher incomes of younger seniors (Myles, 2000, p.23).

The final demographic variable tests whether communities who have fewer native English-speakers have less access to SAFER. It is a measure of the percent of the community for whom English is a second language. There has been significant evidence that individuals with language barriers have trouble accessing social programs (Cheung, Monit, 1989, p.459, Health Canada, 2003). The hypothesis here is that communities with a higher percentage speaking English as a second language will have lower rates of SAFER take-up.

4.2   Shelter-Related Variables

This group of variables is centred on housing or shelter-related information. The variables are designed to test whether variations in housing patterns across communities have any impact on the number of people receiving SAFER, or on the aggregate quantity received. These variables should provide an indication of whether a failure to adjust rent levels across communities is resulting in inequity; this potential source of inequity was identified in the introduction.

Two of the shelter-related variables are measures of rent. The first is a measure of the average rent paid by SAFER beneficiaries per community, and the second is a measure of the average rent per community.[6] If individuals are paying significantly more rent than the maximum rent cut-off, the SAFER program is not reducing their rent to as close to 30% of income as it is to those living in lower-rent communities. This is a potentially significant source of inequity across communities. The SAFER rent measure is more accurate for the program, but the aggregate community measure provides a picture of how SAFER fits into the community indicators recipients of SAFER. There is strong evidence that tight housing markets and a focus on condominium and townhouse construction at the expense of rental unit construction has increased rents across BC much faster than inflation; this is one of the key hypotheses driving this study (BC Ministry of Community, Aboriginal and Women's Services, 1995).

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[6] Note that the average rent level in the community is for all types of units, where the average rent paid by SAFER beneficiaries is a measure only of 1-bedroom apartments.

The second group of shelter-related variables is rental unit availability. This is related to the high rents, and the literature is the same; tight housing markets and low vacancy rates in British Columbia have made it difficult to access rental units (BC Ministry of Community, Aboriginal and Women's Services, 1995). The first variable measures the percentage of owned units in the community vs. the percentage of rented units, and the second measure is a per-capita measure of market rental units in the community. The hypothesis presented in the literature is that communities with fewer rental units, both as a per-capita measure and as a % of total units, will have fewer SAFER beneficiaries and smaller average payments, out of proportion to their other statistics.

4.3   Income and Need Variables

These are mostly control variables. They are designed to test how SAFER is distributed across communities with different income average. In a normal distribution, SAFER recipients per community would decline as average incomes in the community increase.

The first two variables measure the average incomes of SAFER recipients and the average incomes of the elderly in the community. Average incomes in communities should vary inversely with both SAFER benefits and take-up rates; if it does not, there is some inequity in the distribution of SAFER benefits. These variables are intended to test one of the underlying potential reasons for inequity across communities; that the failure to index the maximum rent cutoff levels in the SAFER calculation in accordance with OAS increases has resulted in communities with high increases in rent receiving less of a SAFER subsidy than other communities, other variables held constant. This problem is identified in the Provincial Commission on Housing Options report of 1992, which recommended that SAFER "should be enhanced to maintain or increase benefits to seniors currently using the program and allow other seniors to be eligible for benefits... If rent ceilings are not increased, rising incomes will reduce the number of eligible seniors and, in many cases, reduce the benefits of current SAFER clients" (Duvall & Audain, 1992, p. 65).

The third measure tests the incidence of low-income in the community; it uses the Statistics Canada[7] measure to calculate low-income. Because SAFER is targeted at low-income individuals, this measure acts as an important control variable on the benefit levels and take-up rates with respect to SAFER.

The final income and need variable is a measure of government transfer payments as a percentage of income in the community. The hypothesis is that communities which rely on higher percentages of government transfer payments will see an increased number of SAFER recipients as well as higher average benefit levels. It is a control variable.

4.4   Mobility Variables

Two variables are used to measure mobility in the community. They are the percentage of individuals who, in the last 5 years, moved within the community, and the percentage of individuals who, in the last 5 years, moved from outside the community. These variables are designed to test whether the presence of individuals new to the community has any effect on SAFER take-up rates or benefit levels. The first variable tests whether communities with a less stable housing population (movers from inside the community) have any effect on community take-up rates or benefit levels. This variable is potentially significant because low-income seniors face more barriers to mobility (are less able to search for and find suitable accommodation) than other segments of the population (Hurford, Diana, p.12). The hypothesis of this variable is that communities with more movers within the community will see less SAFER take-up and benefits. The second variable tests whether communities which see more immigration have different benefit levels or take-up rates. The hypothesis of this variable is that an increase in mobility from outside the community will decrease the number of SAFER recipients as well as decrease the average SAFER benefit. There are two rationales for this hypothesis. The first is that new immigrants to BC communities[8], whether from inside BC or from other provinces, are less aware of the spectrum of social programming available to them in that community than residents who have been there for a number of years; this is an awareness problem. A second rationale relates to

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[7] Statistics Canada's incidence of low income measure is based on households who estimate they spend at least 70% of their income on 'essential items.'
[8] Immigration into the community from other countries is also tested using a proxy variable testing the percent of individuals in the community with English as the first language. This variable is included in the demographic variables.

access; the literature presents evidence that SAFER is difficult to apply for as a result of an onerous and confusing application form (Hightower, Hightower and Smith, 2003).

5   Results of Statistical Analysis

This section presents the results of the statistical analysis of communities receiving the SAFER benefit in the years 1996 and 2001. The results are organized by categories of variables (demographic, shelter-related, income and need, and mobility) as presented in the previous section. As previously discussed, the study uses two models to examine the impacts of the SAFER program across communities; the dependent variables used in the models were the per-capita number of SAFER recipients, by community, and the average benefit received by SAFER recipients, by community.

The regression model using average SAFER benefits as the dependent variable had a model strength of 0.794, meaning that the group of independent variables tested can predict 80% of the variation in the dependent variable, benefit. This is a reasonably well specified model. The second model, using the number of SAFER recipients per community, has a Beta model strength of 0.315. Although this model could be better specified, there are significant variables within this that are worth discussing. The following table shows the summary results of the models used in the analysis. The measures of error and adjustments made to the model are described in Appendix C.

Table 7: Summary of model strength, take-up and benefit dependent variables

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Take-up as dependent	.588(a)	.346	.315	1.10340
Benefit as dependent	.896(a)	.803	.794	18.35189

The following table summarizes the individual regression co-efficients for each of the variables used in the analysis. The first three data columns are the relevant results of the model using the SAFER take-up variable. The second three columns are the results of the model using the average benefit as the dependent variable. The unstandardized co-efficient figure represents the number of

units the dependent variable will move because of a 1-unit change in the independent variable. This measure varies depending on the type of unit used in the independent variable, and so it cannot be compared across variables. The Beta figure represents the percentage of change the independent variable has on the dependent. For example, a 1.000 Beta figure means that the independent variable could predict every change in the dependent variable. Finally, the significance represents the degree of confidence that the variable could be statistically repeated; the lower the significance value, the greater the confidence that the variable is not due to error. This study uses the 95% confidence interval (Sig. < 0.05) as a measure of reliability.

Table 8: Summary of regression results, by variable

	Take-up variable			Benefit Variable		
	Unstand Coeff.	Beta	Sig.	Unstand Coeff.	Beta	Sig.
Demographic						
Average age of SAFER recipients	.041	.157**	.003	.220	.028	.341
Unstandardized Eligible Population	.000	-.023	.736	.000	-.041	.277
SAFER take-up- recipients as % of age-eligible population	XX	XX	XX	-2.168	-.072*	.024
Age eligible Population as a % of Community	.018	.114	.249	-.376	-.077	.156
% of population with English not as mother tongue	.606	.036	.656	4.129	.008	.855
Shelter						
Rent paid by SAFER recipients (before subsidy)	.002	.095	.135	.351	.735**	.000
% of units in the community rented (vs owned)	-2.597	-.501**	.000	-23.164	-.148*	.012
Average rent per community	.000	-.052	.509	-.014	-.051	.237
Income and Need						
Average monthly income of SAFER recipients	.000	-.003	.949	-.283	-.800**	.000
Average monthly incomes of 65 and above in community	.000	-.015	.841	-.001	-.009	.834
% of population spending 30% or more of income on rent	2.883	.377**	.001	28.887	.125*	.048
Government transfers as % of Income	-.051	-.229*	.051	.261	.039	.548
Incidence of low income in 1995/2000	.089	.365**	.000	.228	.031	.525
Mobility						
Movers, in the last 5 years, within the community (as a percentage)	4.432	.295**	.000	3.613	.008	.824
Movers, in the last 5 years, from outside the community (as a percentage)	-12.376	-.238**	.008	-170.992	-.109*	.029

* is significant at the 95% confidence interval, and ** is significant at the 99% confidence interval

The variable describing SAFER recipients as a percentage of the age-eligible population shows results only for the benefit variable; this is the same measure used as the dependent variable for the take-up model. It therefore has perfect correlation with the take-up dependent, and so it

cannot be used in that model. The data tables with complete co-efficient results, including error residuals, correlations, and other statistics, can be found in Appendix F.

The following individual sections describe some of the significant results in the analysis, and draw conclusions from the results.

5.1   Demographic Variables

The average age of SAFER recipients is the only significant demographic variable. It is a positive relationship, suggesting that the older the average age of seniors per community, the higher the number of recipients in that community. For every increase in age by unit (1 year), the number of recipients in the community increases by approximately 0.4. This may be a result of a purely demographic function; as suggested in the literature, younger seniors, growing up in a wealthier period, have greater personal assets, savings and other resources to draw upon, thereby increasing their income and decreasing their reliance on SAFER.

Table 9: Significance of average age of SAFER recipients, using take-up rate as dependent

Variable	Range	Minimum	Maximum	Mean
Age	33.00	64.00	97.00	80.23
Dependent variable: Take-up rate	Unstandardized Coefficient	Beta		Significance
Average age of SAFER recipients	.041	.157**		.003

It is difficult to draw any lessons from this relationship, other than to suggest that SAFER be marketed to younger seniors as well as to older seniors; however, there is no evidence to suggest that the reason communities with younger average ages have fewer recipients is because of poor marketing. While the age variable is important as a marker, it does not represent any inequity of distribution across communities. It is simply a phenomenon that should be tracked through time as a demographic marker.

5.2   Shelter-Related Variables

The shelter-related variables are significant in several ways. First, the study provides no evidence to demonstrate that SAFER discriminates by providing fewer benefits to lower-income individuals in higher-rent communities. The study was unable to discover whether communities

with higher average rental costs also have more individuals receiving SAFER. The significance of the average rent variable was .509 for the take-up dependent and .237 for the benefit dependent variable. Due to this low significance, no conclusion can be inferred from this relationship. Further study may be necessary to determine the impact of rental costs on SAFER recipients.

An important control variable in the study is the average rent paid by SAFER recipients. This variable should correlate strongly, in a positive direction, with the benefit variable; the benefit received by SAFER is calculated based in part on rent paid by the recipient, and therefore one would expect the rent variable to have a significant impact on benefits received in the community. It does; the Beta value of the variable is .735, and it is significant at the 99.9% confidence interval. The conclusion from this variable is simply that the mechanics of the program function as expected, providing higher benefits to those paying more in rent.

A significant inference among this group of variables is that the number of rental units in the community is important to determining both SAFER take-up rates and benefit levels. In both models, the measure of the percentage of units in the community rented vs. owned was significant and was a predictor of change in the dependent variable. A second independent variable, the per-capita number of rental units in the community, had significant multi-collinearity with the percentage of units rented, and was therefore removed from the analysis.

Both measures suggest that that there is a negative relationship between rental unit availability and benefit/take-up rates for SAFER. The take-up variable is most significantly impacted by this variable. A negative standardized Beta correlation of -0.501 indicates that as the percentage of units rented increases, the average number of SAFER recipients decreases. Therefore, communities that have fewer rental units as a percentage of their total housing have more SAFER recipients.

Table 10:Regression result, percentage of rental units in community variable

Descriptive Statistics	Range	Minimum	Maximum	Mean
% of units in the community rented (vs owned):	.84	.06	.90	.47

Regression Results	Unstandardized Coefficient	Beta	Significance
% of units in the community rented (vs owned): take-up variable	-2.597	-.501**	.000
% of units in the community rented (vs owned): benefit variable	-23.164	-.148*	.012

It appears, from these two measures, that the increased availability of rental units in the community has a positive impact on seniors, reducing the numbers who need to apply to SAFER. It is important to note that this is not a result of any inequity of distribution as a direct result of the design of the SAFER program. It is, however, evidence that low rental availability in communities disadvantages seniors. This may seem self-evident from a market perspective; low rental availability will result in higher rents, which will in turn increase the benefits paid, as well as the number of recipients in need of the program. A Pearson correlation test was performed to determine the relationship between high rents and low availability of rental units. The relationship was significant at the 99% confidence interval, and the relationship strength was -.106. Therefore, low availability of rental housing in the community appears to have some minor impact on rent prices; as the availability of rental units decreases, rental rates increase, albeit with a relatively weak relationship.

This evidence points to a need for BC Housing to encourage the construction and development of rental housing in the community. Although an analysis in this respect is beyond the scope of this paper, the final section does provide additional information on the rental unit problem.

5.3   Income and Need Variables

The regression models testing income and need variables, using both dependent variables, suggest that the SAFER program is working as intended. The regression test using average benefits as the dependent showed that, as should be the case, communities where SAFER recipients have lower average incomes are receiving the highest average benefits. This test was significant at the 99% confidence interval; a Beta co-efficient of -.800 indicates that, as the average incomes of SAFER recipients in communities across BC increase, the average benefit decreases. As with the average

rent paid by SAFER recipients, this variable represents a control variable testing the mechanics of program distribution.

Table 11: Regression result, average monthly incomes of SAFER recipients, using benefit as dependent

Descriptive Statistics	Range	Minimum	Maximum	Mean
Average monthly incomes of SAFER recipients	1357.00	445.00	1802.00	1163.44
Regression Results, using Benefit as the dependent	Unstandardized Coefficient	Beta	Significance	
Average monthly incomes of SAFER recipients-	-.283	-.800**	.000	

The dependent variable measuring SAFER take-up reinforced the intended income discrimination aspect of the SAFER program; those communities with higher low-income statistics, and those with significant 'core' housing need (contributing more than 30% of their income towards rent), and have more individuals receiving SAFER. These results are to be expected, and justify the use of a demand-side program such as SAFER. A demand-side program, as discussed in section 2, is capable of responding to shifts in socio-economic demographics far faster and more efficiently than supply-side investments. As a result, SAFER is working well if higher benefits and more recipients are concentrated in communities with lower socio-economic status. These models appear to have proved that this is the case. Each of these variables is significant to at least the 95% confidence interval. The first indicator in the table below, a measure of the percentage of population spending 30% or more of income on rent, has a Beta value of .377. Communities with more individuals spending 30% or more of income on rent experience higher rates of program take-up. This variable is also significant, in a positive direction, with respect to the benefit dependent variable, although the Beta value is lower, at .125. Second, communities with higher incidences of low income, as measured using the Statistics Canada measure of those spending more than 50% of income on essential goods, also experience greater SAFER take-up rates.

The conflicting result is the variable measuring government transfers as a percentage of income in the community. This variable has a Beta co-efficient of -.229, which indicates that communities in which government transfer payments make up a higher percentage of income experience lower SAFER take-up rates. This result is difficult to interpret. Government transfer payments to communities are based on more than simply income and need; these other factors may be

contributing to the result. To some extent, this result weakens the argument that SAFER is well-targetted to communities with lower socio-economic indicators.

Table 12: Regression results, community income indicators, using take-up as dependent variable

Regression Results, take-up rates as dependent variable	Unstandardized Coefficient	Beta	Significance
% of population spending 30% or more of income on rent	2.883	.377**	.001
Incidence of low income in 1995/2000	.089	.365**	.000
Government transfers as % of Income	-.051	-.229*	.051

Individual or time-series analysis would likely be a more effective test of whether incomes, particularly increasing incomes, have rendered some individuals ineligible for the SAFER program. Data to produce a time-series or individual level analysis was not available for this study. As a result, the conclusions can only be based on a static reading of the data. From this reading, however, it appears as if SAFER is doing an effective job of distributing benefits across communities who have the most need.

5.4   Mobility Variables

The analysis of the mobility variables suggest two important results with respect to the equitable distribution of the SAFER program. Mobility from inside the community has a positive effect on rates of SAFER take-up, while mobility from outside the community has a negative effect on SAFER benefit levels and community take-up rates.

The first mobility variable measures those who have moved into the community, from an external location, within the last five years. Using average SAFER benefits as the dependent, for every 1-unit (100%) change in the number of movers, the benefit decreases by $170. The Beta value for the benefit variable is -.109, which demonstrates a weak negative impact by the external mobility variable on average benefit levels. This is an instance where the benefit variable must be interpreted cautiously; there could be several reasons for communities with higher mobility to

have lower benefit levels. The take-up variable is a more important measure. It demonstrates a Beta value of -.238. As the number of movers from outside the community increases, the average number of SAFER recipients decreases.

Table 13: Regression results, external mobility variable

	Range	Minimum	Maxim um	Mean
Movers, in the last 5 years, from outside the community (as a percentage)	.20	.00	.20	.02

	Unstandardized Coefficient	Beta	Significance
Movers, in the last 5 years, from outside the community (as a percentage): take-up as dependent variable	-12.376	-.238**	.008
Movers, in the last 5 years, from outside the community (as a percentage): benefit as dependent variable	-170.992	-.109*	.029

There are several possible explanations for the external mobility variable impact. One explanation for this finding might be that, as seniors as a demographic group are less mobile, seniors with low incomes are less able to move locations than seniors with higher incomes. Thus, it might be expected that communities with lower external mobility among the population would also be communities with lower incomes. However, a bivariate correlation[9] found no significant relationship between these variables. This study had no information about mobility trends with respect to newer immigrants, non-Canadians, or the eligible SAFER population.

A second rationale relates to SAFER's eligibility criteria. They state that to apply to SAFER, an applicant must have lived in Canada for at least 10 continuous years as an adult, and must have lived at least one full year in British Columbia prior to application to the program. Thus, recent migrants to Canada, and those individuals who very recently migrated to British Columbia, may not apply to receive SAFER. Since the variables used in the study tested individuals who had moved within the last 5 years, no movers from outside of Canada within that bracket would have

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[9] A Pearson correlation co-efficient was used to test bivariate relationships between variables. For average income of SAFER recipients and mobility from outside the community, the co-efficient is only .126, suggesting that there is little correlation between the two variables.

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been eligible to apply to SAFER. The residency requirement is in effect because eligibility for Old Age Security (OAS) is a 10-year Canadian residency requirement, and BC Housing has streamlined their eligibility requirements such that being eligible for OAS makes an individual eligible for SAFER. This may be a partial explanation for the external mobility finding; however, the variable does not distinguish between those who have moved into the community from another country, and those who are simply moving in-province or within Canada; therefore, it is impossible to place a high degree of explanatory power on this variable.

A third explanation of the significance of the mobility variable is that new immigrants to the community are unable to access SAFER either because of a) lack of knowledge of the program, or b) difficulty of access to the program. The study did not examine variables that were able to measure whether this was a problem. However, previous studies (Hightower, Hightower and Smith, 2003) have discussed difficulties that seniors face in accessing SAFER, whether through a complicated application form or lack of knowledge of the program. This explanation will be discussed in more detail in Section 6.2.

The second measure of mobility is an internal measure; it relates to those who have moved, within the community, in the last five years. This variable is insignificant using the benefit measure as the dependent variable. Using the take-up measure as the dependent, internal mobility has a Beta value of .295. Importantly, the relationship is the opposite of the external mobility variable; if the number of movers from within the community increases, the number of people receiving SAFER also increases.

Table 14: Regression results, internal mobility variable, using take-up as dependent

	Range	Minimum	Maximum	Mean
Movers, in the last 5 years, from outside the community (as a percentage): take-up as dependent variable	.55	.23	.78	.47
	Unstandardized Coefficients	Beta	Significance	
Movers, in the last 5 years, within the community (as a percentage): Take-up as dependent	4.432	.295**	.000	

One possible explanation for this relationship disputes one of the recognized disadvantages of shelter programs such as SAFER. There is some literature arguing that shelter subsidy programs do not encourage moves to more adequate housing; one study notes that "the proportion of Percent of Rent households in adequate housing did not change materially over the course of the first 2 experimental years" (Friedman & Weinberg, 1982, p. 132). This is not the goal of housing subsidy programs; they are intended primarily to re-adjust the rent-to-income ratio to close to 30%. However, the increased SAFER take-up rates among more internally mobile populations suggest that receipt of SAFER allows individuals to move, perhaps to increase housing adequacy. The variables do not provide enough information to prove that this is the case; once again, further study will be necessary to focus in on the determinants of this relationship.

The two mobility alternatives move in different directions; the variable testing mobility of those moving from outside the community results in less take-up of SAFER, and fewer benefits, while the variable testing mobility within the community is linked to higher rates of take-up. Several of the explanations discussed above may provide the answer to the contradiction within the mobility variables; however, further study is necessary around the mobility issue to answer some of the questions raised. In section 6, this study uses the external mobility variable to suggest several alternatives; it is important to note that these suggestions are contingent only on a further examination of the mobility issue.

5.5   Summary of Major Findings

The central finding of this analysis is that, based on the regression performed in this study, SAFER appears to be functioning as intended. Although the study was unable to prove that increases in rents lead, or do not lead, to inequalities in the distribution of SAFER benefits across communities, other income and need-related evidence presented, such as the percentage of low-income communities with high rates of take-up, demonstrates that SAFER is well-designed and reasonably effective. It is functioning well in those communities with the most need, and it is meeting its program goals. It is not increasing spending on housing significantly, but this is also in line with observations from similar programs.

However, other variables in the analysis have discovered at least one potential source of bias in the distribution of SAFER benefits, with respect to the provisions of the program. Communities with high external mobility have fewer SAFER recipients and have lower average SAFER benefits. The following are the significant inferences that can be made from the data analysis:

- **SAFER is effective and well targeted across communities.** This finding speaks to the initial hypothesis with respect to distribution across communities with different income and need levels. The study was unable to find evidence of bias or inequity in the distribution of SAFER benefits because of rental costs or high-rent markets. Low-income communities have more individuals receiving SAFER, as expected; this is a sign that the program is well targeted across communities.

- **Mobility, from outside the community, has a negative effect on SAFER benefit levels and take-up rates.** Communities that experience higher external rates of mobility experience lower levels of SAFER benefits and lower levels of community take-up. This is the only source of inequity across communities, as a result of a design feature in the SAFER program, that this analysis was able to identify. This would not be a problem if income variables were also higher in high-mobility communities; however, individual correlations show that they are not significant. This result will be studied further in the following section.

- **Mobility, from inside the community, has a positive effect on SAFER take-up rates.** Communities that experience higher rates of internal mobility have higher rates of take-up of SAFER. This is in contrast to the external mobility relationship, which found the opposite. It is difficult to pinpoint the reason for this finding; however, one impact of this relationship is to cast some doubt on the extent of the significance of the external mobility finding. Further study is necessary to identify the underlying reasons for this relationship.

- **The number of rental units in the community is important to determining both SAFER benefit levels and take-up rates.** A community with many available rental units does not experience the same take-up rates for the SAFER program as a community with few available rental units. Further, this does not appear to be associated with rental unit pricing. However, this does not point to inequity within SAFER's design and structure, but to a wider policy problem related to housing construction and subsidies. This is also discussed in the following section.

The following section discusses alternatives focussed on finding solutions to the program gaps identified in the statistical analysis.

6 Analysis of Policy Alternatives

As discussed previously in section 3.1, it would be desirable to see an increase in SAFER recipients only if it could be determined that some eligible BC seniors were being treated inequitably, relative to other BC seniors in a similar situation, because of SAFER's program characteristics. That is, if there were some individuals who were either not receiving SAFER at all, or not receiving their full quota of benefits, for reasons such as choice of community, recent mobility, or amount of rent paid, then the program enrolment should increase to the point where they are included. If there is inequity in the distribution of SAFER, then some communities should see increases in the number and average benefits of SAFER recipients.

This chapter of the study will focus on two of the findings of the study identified in section 5.5- the external mobility effect and the rental unit effect. The following subsection is a brief summary of the main provisions of SAFER as they relate to these two variables.

6.1 Relevant SAFER program characteristics

The following characteristics of the SAFER program are relevant to the mobility variable and the rental unit effect:

- Application and re-application requirements: SAFER applicants must apply to SAFER through a four-page application process that some seniors find difficult or onerous (Hightower, Hightower & Smith, 2003, p. xiv & 17). Applicants must inform BC Housing immediately if their income or rent circumstances change, and must apply for re-assessment if they move locations. They are threatened with having to repay any potential overpayments resulting from a failure to report changes in circumstance.

- Eligibility requirements: SAFER requires that, in order to be eligible for the SAFER program, the applicant has lived in Canada for at least 10 continuous years prior to application to SAFER, and that the applicant has lived in British Columbia for the full 12 months immediately preceding the application to SAFER.

- Maximum eligible rent levels: The following maximum rent levels apply to SAFER applicants. Applicants are still eligible to apply if their rent exceeds these maximum levels, but their subsidy will only be calculated at the maximum level outlined:

Table 15: Maximum rents and incomes for SAFER eligibility

Housing Unit	Maximum rent allowed in calculation (monthly)	Maximum gross income (monthly)
Single	$520	$1733
Couple	$575	$1918
Shared unit	$885 (divided by number of adults who share the home)	$1470

- Current availability of SAFER materials: SAFER materials and information is currently available in English, Chinese and Punjabi. SAFER materials are available at a number of municipal information centres, housing services offices throughout BC, and by contacting BC Housing directly.

6.2   Policy Alternatives: External Mobility

This section explores alternatives related to ensuring that communities that see higher rates of external mobility do not have fewer SAFER beneficiaries than they should, given the variation in control variables. The first three sections explore alternatives centred on three central explanations for the discrepancy in the mobility variable: lack of knowledge of the SAFER program, difficulty of access to the SAFER program, and regulations that prevent new arrivals to BC from accessing SAFER. The fourth section evaluates the options against these criteria, and arrives at a recommendation on how to ensure communities that experience more mobility are not at a disadvantage with respect to access to SAFER.

It is important to note that the external mobility finding is contradicted by the positive relationship in the internal mobility variable. Some explanations for the difference in the direction of relationships in the two variables have been explored in section 5. However, until the mobility question is examined in further detail, these alternatives are at the level of suggestions.

6.2.1   Knowledge of SAFER program

One explanation for lower SAFER take-up in communities with high external mobility may be information; newcomers to communities may not be fully aware of the range of programs available to them. Seniors generally have tightly knit communities, and while information may flow freely within communities, newcomers may not be aware of SAFER or similar programs. The following list describes how SAFER information is currently disseminated to municipalities:

- Through BC Housing's website (www.bchousing.org)
- Through community presentations to local service agencies that work with seniors.
- Through BC Housing's Regional Offices (in Victoria, Penticton, Prince George, Prince Rupert, GVRD).
- Through government agency offices in communities across the province .
- Through seniors' supplements in the Vancouver Sun (this occurs twice a year).
- Through the Senior's Housing Information Program, in the Lower Mainland.
- Through different Seniors' Councils which also maintain a database on all services/supports for Seniors (Personal Correspondence, February 16 2005).

This range of policy alternatives is based on formulating the external mobility finding in a manner that explains low rates of SAFER take-up as a result of lack of knowledge about the SAFER program. This hypothesis is supported by a 2003 Senior's Housing Information Program report, which recommended that BC use public service announcements to raise the profile of the SAFER program (Hightower, Hightower & Smith, 2003, p. 66). The following alternatives address the information problem:

6.2.1.1   Publicize SAFER through an advertisement campaign in apartment buildings and neighbourhoods popular with seniors.

If the reason for the significance of the external mobility co-efficient is a lack of knowledge about the SAFER program, an advertising campaign focussed on buildings with senior residents in high-mobility communities might be effective at increasing knowledge of the program. Posters in laundry rooms of rental units, in local tourist or community offices, or in other places frequented by seniors might be an effective strategy. To address the concerns of arrivals from other countries, posters should be available and distributed in several languages.

6.2.1.2 Publicize SAFER through advertising program to landlords of apartment complexes or rental units.

Although one advantage of the SAFER program is the minimization of stigma (as discussed in section 2, applications and funding is directly through the individual and not through the landlord), landlords who are discussing rental units with elderly seniors might mention the SAFER program as a potential option for reducing the rental burden. This might be an effective strategy given the incentive for the landlord to make the rent burden manageable in order to increase the certainty of on-time rent payments. This would be a voluntary initiative; information would be provided to landlords, describing the program and the way it functions. Landlords, upon obtaining the information they require to process housing applications, would then be in a position to suggest the program as a top-up to the tenant's current ability to pay.

6.2.2 Access to SAFER

The ability to take advantage of the SAFER program is dependent on two things: information and ease of access. Information refers to the extent to which the eligible population is aware of the SAFER program and its benefits. Ease of access, on the other hand, refers to the ability of the eligible population, once they are aware of the program, to gather the relevant information needed to be able to apply for the program. It also refers to the actual difficulty level of applying for the program.

Applications and access to SAFER can be made through the following conduits:

- By phone, in person, or through e-mail via BC Housing's Housing Services Department.
- Through the website (the application form is available on-line).
- Through BC Housing's Regional Offices (described above).

There are two significant improvements which could be made in order to make the SAFER program easier to access:

6.2.2.1 Make SAFER easier to access by moving the application and update process to an on-line database

The current SAFER application is available to download on-line, but applicants must mail the form in order to apply to the program, and must inform BC Housing by e-mail or telephone of any changes to income, address or rent situation. An on-line application and information update process could be faster, could simplify the administration of the program, and could lower the

barriers to program access. An online system should not replace the current system, but should be an additional registration option.

6.2.2.2 Streamline the SAFER application form to make it less complicated and demanding

The "Out of Sight, Out of Mind" report cites, several times over, the difficulties that seniors face in applying to SAFER. One of its recommendations is that BC Housing rewrite the application forms such that "they are easily read by an individual with less than a grade nine education" (Hightower, Hightower and Smith, 2003, p. xiv). While it may be difficult to re-work an application form such as SAFER to a grade 9 reading level, because of the level of information it requires, BC Housing should examine the form to see if it is possible to remove or combine some information requirements to reduce the complexity and length of the four-page form.

6.2.3 Criteria for judging mobility alternatives

The following criteria were used to assess the alternatives outlined in the previous section:

- Cost: This refers to the cost to BC Housing of implementing and maintaining this alternative.

- Simplicity of use: This is related to cost, but speaks to the ease of implementing the alternative, relative to the status quo. Simplicity is related to administrative simplicity, for program officials, and to external simplicity, for those applying to the program. For example, alternatives which make the application process more complicated for seniors should be considered complex. As well, a redesigned application form which gives program administrators more work in order to determine eligibility is undesirable.

- Disincentive effects: This criterion speaks to the unintended effects the alternative may result in; increased stigma or upwards pressure on rental prices would be examples of disincentive effects. SAFER is a subsidy program, and as a result of the mechanics of subsidy calculation, interferes with an individual's consumption choices at the margin. Thus, minimizing disincentive effects to decrease economic inefficiencies is desirable. A second type of disincentive effect would be whether or not an alternative makes fraudulent claims easier to make, or more difficult to identify.

- Effectiveness: This criterion evaluates the effectiveness of the alternative at achieving or 'solving' the problem. The problem in this case is different for each of the alternative categories; it is variously the ability of the alternative to increase awareness of the program, and the ability of the alternative to make SAFER easier to access.

- Targeting: This criterion relates to the ability of each alternative to be targeted to the communities that experience higher rates of mobility. Some alternatives are province-wide, and while they may have some overall effect, it may be possible to limit alternatives to certain communities, which might increase the cost-effectiveness of the alternative.

6.2.4 Evaluation of mobility alternatives

6.2.4.1 Criteria matrix

Each alternative is explored in the table below with reference to the five criteria. The assessments of each of the criteria are based in part on a review of the literature surrounding SAFER and similar types of shelter subsidy programs, and in part on common-sense estimations of the impacts of each of the alternatives.

Table 16: Evaluation of Information-related Mobility Alternatives

Criteria	Ad campaign	Publicize through landlords
Cost	Initial and on-going cost, depending on desired length of program	Initial and on-going significant cost, depending on length of program
Administrative Simplicity	No change/no significant administrative effect	No change/no significant administrative effect
Disincentive Effects	No significant disincentive effects	Significant potential for perceived stigma if landlords are aware who is receiving program; significant disincentive effect
Effectiveness	May be effective, but less focused effectiveness	Likely to be the most effective at ensuring seniors are aware of program
Targeting	Not very effective; will reach a broader audience than seniors, and will miss many seniors who do not live in multi-unit residences	Effective program targeting; will certainly reach the desired audience because it is in landlord's interest to ensure stability of his renters

Table 17: Evaluation of Access-related Mobility Alternatives

Criteria	Online Database	Streamlined Application Form
Cost	Significant initial development cost. Low on-going maintenance cost	Significant initial cost of re-structuring form; will be less than online system. No on-going maintenance costs
Administrative Simplicity	Has potential to make administration simpler than current application process	Will likely make administration simpler, but will reduce the depth of knowledge BC Housing will have about its applicants
Disincentive Effects	Seniors may make application errors due to low Internet literacy; should not replace the current form, only add to it	A form that asks for less information increases the potential for fraudulent claims to be made; is a concern.
Effectiveness	Seniors may not be computer-literate; may reduce use and effectiveness. Otherwise, potentially very effective	Will be effective at increasing the accessibility of the SAFER program ONLY for those seniors for whom completing the form is currently a problem; unsure of problem magnitude
Targeting	No targeting; province-wide initiative	No targeting; province-wide initiative

6.2.4.2 Final Assessment

Ad campaign: This option will have some effectiveness; however, it is unclear whether it will reach individuals who have not previously been informed of the program. Mounting a targeted campaign with substantial coverage would have some significant cost.

Publicize through landlords: This option is likely to be quite effective; landlords are a smaller group and are likely to be able to isolate through various associations or government listings. They have an incentive to ensure that their tenants have housing security, and are therefore likely to help eligible seniors with information. The big risk with respect to this option, however, is that seniors will feel as if landlords are discriminating against those individuals whom they know are relying on government for assistance. That direct rent subsidy programs avoid this stigma problem is a distinct advantage that is recognized in the literature.

Online system: This system has the potential to greatly decrease the barriers to access SAFER is faced with. It also has the potential to reduce administrative costs by moving a substantial amount of work to an electronically updated database. Seniors are generally not computer literate; this option therefore has the potential to be a significant cost with little immediate impact on access. Over the long term, however, the impact of this change will make the program substantially easier to access, as seniors gain more computer skills.

Streamlined Application form: This initiative may have some impact on increasing the accessibility of the SAFER benefit to a larger number of seniors. It is difficult to assess how many seniors are being deterred by the complicated nature of the application form; the evidence suggesting this is a problem in the literature is derived from qualitative interview and focus group data (Hightower, Hightower & Smith, 2003, pp.6-8). The cost of exploring this option is likely justified, if only to assuage public concerns about SAFER accessibility. One concern is the extent to which a form requiring far less information increases the chances of fraud; however, proper design can minimize this constraint.

6.2.5 Summary of Mobility Analysis

The two categories of changes involved with respect to the mobility variable (information and accessibility) make it very difficult to make choices between alternatives in different categories. However, given the assessment above, this study does not recommend either of the information options considered. The publicity campaign option is not likely to effectively reach its intended

audience, while publicizing through landlords jeopardizes the low-stigma aspect of the SAFER program. While both of the accessibility options would be desirable to implement, the online option is likely less pressing than streamlining and simplifying the current application form to allow seniors with less support and education to successfully apply for the subsidy. Over time, however, as the internet literacy of seniors increases, an on-line application and update tool will significantly reduce any barriers to access experienced by applicants to the SAFER program. Therefore, this study suggests that 1) BC Housing re-evaluate the SAFER application form to reduce its complexity and allow seniors with low education to successfully apply to SAFER, and that 2) BC Housing make SAFER easier to access by moving the application and update process to an online system.

6.3   Policy Alternatives: Rental Unit Availability

Section 5 concluded by suggesting that BC Housing (or a more relevant agency such as a regional/municipal government) implement a strategy designed to encourage the construction of rental units in communities with scarce rental unit availability. These alternatives are outside the analytical scope of this study; there is a broad range of alternatives to encourage the construction of rental units, and this topic is a worthy enquiry in its own right. As an example, consider the City of Vancouver's initiative to encourage rental housing. The strategy is made up of the following components:

- Encouraging the upgrading and legalization of existing secondary suites
- Providing rental housing through density bonuses in private sector development
- Facilitating the purchase of SRO's by non-profit sponsors
- Monitoring the rate of demolitions on neighbourhoods with high proportions of non-profit housing
- Regulating the conversion of rental housing to condominiums
- Leasing land for assured moderate rental housing
- Levying a fee for demolition of housing units
- Ensuring tenants are given four months' notice of termination (City of Vancouver Housing Centre, 2004, p.2)

Given the range of programming options outlined above, this study cannot perform a comprehensive analysis of all policy options related to encouraging rental units. However, this study will attempt to set the scene for such an analysis. This section outlines some descriptive

statistics relating to the nature of communities with the largest rental 'problems', outlines some criteria that decision-makers might want to take into account when evaluating options relating to encouraging the construction of rental units, and suggests some next steps if such a study were to take place.

6.3.1   Context of rental problem

The analysis uses two variables to examine rental units and their availability in communities across British Columbia. The first variable is the per-capita number of rental units, per community. This variable is excluded from the regression analysis because of significant multi-collinearity with the other rental unit variable. However, the descriptive statistics of this variable are included below. The second variable, and the one which remained in the regression, is the percentage of units in the community that are rental units (compared to the percentage of units that are owned and private, non-rented dwellings.) The following are the summary descriptive statistics of each variable:

Table 18: Descriptive Statistics, Rental Variables

	Range	Minimum	Maximum	Mean
% of units in the community rented (vs owned)	0.84	.06	.90	.47
Per-capita rental units	0.35	.02	.37	.18

The following table describes the municipalities with both the lowest percentage of rental units as compared to units owned, and the municipalities with the lowest per-capita number of rental units. For these descriptive statistics, all cases without SAFER data were removed, leaving an N of 326. All cases with no values for these two variables were also removed.

Table 19: Communities with highest rental pressures

Community	Census Subdivision	Population	% of Units that are Rented	Per-Capita Rental Units	SAFER recipients as # of eligible population (Take-up Dependent)	Average Monthly Incomes of 65+
BC Mean	XX	21515	0.47	0.18	1.43	1813.24
HALFMOON BAY	Sunshine Coast B	2355	0.13	0.06	.07	2304.00
GILLIES BAY	Powell River D	1130	0.13	0.06	.33	1770.33
FAIRMONT	East Kootenay F	3355	0.13	0.05	.74	2049.67
ST IVES	Columbia-Shuswap F	2125	0.12	0.05	.14	2118.17
CLUCULZ LAKE	Bulkley-Nechako C	1685	0.12	0.04	.15	1879.42
TOPLEY	Bulkley-Nechako G	1095	0.11	0.04	.56	1854.67
LIONS BAY	Lions Bay	1375	0.11	0.04	.50	4405.58
DEKA LAKE + LONE BUTTE	Cariboo L	4245	0.11	0.04	.43	1595.17
TELKWA	Telkwa	1370	0.1	0.03	.32	1415.92
GREENWOOD	East Kootenay E	1825	0.1	0.04	1.05	1586.33
COBBLE HILL	Cowichan Valley C	4545	0.07	0.03	.57	2933.92
BALDONNEL	Peace River C	5830	0.07	0.02	.27	2080.00
PORT EDWARD	Port Edward	655	0.06	0.02	.18	1451.25

Every one of these communities has a small reported population count. The largest is the Peace River C area, with one SAFER recipient in Baldonnel and a reported population of 5,830. The two variables that test rental unit availability are very highly correlated across the dataset, and so the variables with the lowest percentage of units rented are those with the lowest per-capita rental units. Because the population of the cases with the lowest per-capita number of rental units is so small, this analysis points to the conclusion that the rental unit problem, while perhaps most obvious in large municipalities such as Vancouver, is in fact most serious in smaller, rural communities. The community of Port Edward, just south of Prince Rupert on the north coast of BC, reports both the lowest rent-vs.-own percentage, a very surprising 6%, as well as the lowest per-capita rental units, at 0.02. The 2001 case for Port Edward reports an average SAFER benefit of $138.41, well above the provincial mean of $108.34, and a per-capita SAFER count of 1.43, which is slightly below the provincial mean of 1.51.

Not all of the communities in this list are isolated or low-income; Cobble Hill and Lion's Bay, for instance, are two high-income communities in or near major population centres. These communities have less rental unit availability simply because they are very high-income; one would expect fewer SAFER recipients in these communities. The concern is with the communities whose average incomes (for those 65+) are near or below the provincial monthly average. Those who are tend to be isolated in geographic terms. Therefore, it appears that isolated and low-population communities below a certain income threshold require some impetus to build and maintain rental housing, particularly for its senior residents.

6.3.2 Potential Criteria and scope of alternatives

Clearly, the scope of alternatives available to encourage the construction of rental housing in rural, remote low-population communities is less than that of more organized, larger and better-equipped municipalities or municipal districts. As discussed above, an analysis of the particular policy tools to encourage rental units remains beyond the scope of this study. The following criteria, however, may be of use to decision-makers when attempting to consider the types of housing strategies they may want to embark on:

- **Effectiveness:** This relates to the alternative's ability to conserve and/or encourage the construction of medium to low cost rental apartments

- **Cost:** Given the budgets and capacities of planning authorities in rural areas, the cost of achieving rental housing is significant. This criterion may be so important as to limit the alternatives to regulatory or publicity measures, rather than subsidies.

- **Degree of Coercion:** District authorities in rural areas are likely less empowered to control development than larger, stronger municipal bodies. They may be less able to enforce decisions that are unpopular with builders/developers.

- **Administrative Simplicity:** Given the low capacity of rural community district authorities, policy solutions should be simple and easily enforceable

- **Long-term effectiveness:** This is an important distinct criterion from initial effectiveness. The availability of rental units in the long-term is a significant issue; many communities are facing problems because developers are turning rental units into the more profitable condominium or townhouse projects. A plan to encourage rental housing should include more than short-term, easily terminated action items. Rental units should be encouraged in the long term as an affordable option for individuals who cannot afford to purchase a house.

- **Delivering/sponsoring body:** An analysis should consider where the burden of program delivery/enforcement lies. Although the previous criteria have assumed that a municipal authority would be responsible for plans to encourage rental units, this may not necessarily be the case. Provincial authorities, such as BC Housing, may be more effective at delivering a housing strategy.

6.3.3   Next Steps

BC Housing should consider funding a further study into the linkages between affordable rental housing units and the availability of rental units in communities. A second regression analysis might be a useful starting place. The analysis could use availability of rental units in the community as the dependent variable, and use measures of income and rental rates as dependent variables. Particular attention should be paid to smaller, rural and isolated communities. The study should conclude with the **development of a strategy to ensure some minimal level of rental unit availability, as a percentage of total units, in communities below a given average income threshold.**

6.4   Summary

This study examines SAFER from the perspective of distribution across communities. Variables in the study are selected based on a variety of hypotheses with respect to different determinants of SAFER take-up rates and benefit levels across communities. An initial hypothesis driving the study was that the failure to index SAFER to rent or cost-of-living increases in communities across BC would result in an uneven distribution of SAFER take-up rates in communities with low vs. high incomes. This analysis was inconclusive with respect to this hypothesis; however, the study did find some unevenness of benefits and participation due to the low availability of rental units and high external mobility in some communities. The mobility variable is contradicted by a significant internal mobility variable; however, there may be different reasons for this unrelated to the external mobility variable. Following an analysis of alternatives aimed at reducing the gap in benefits and take-up rates between high and low external mobility communities, this study suggests that:

1. BC Housing re-evaluate the SAFER application form to reduce its complexity and allow seniors with low education to successfully apply to SAFER.

2. BC Housing make SAFER easier to access by moving the application and update process to an online system.

The study also examined the rental unit shortage problem. Although an analysis of this problem with a view towards finding solutions is extremely complex and beyond the scope of this study, the analysis did find that this problem is concentrated, somewhat surprisingly, in isolated and rural communities. This study recommends that

3. BC Housing pursue the development of a strategy to ensure some minimal level of rental unit availability, as a percentage of total units, in communities below a given average income threshold.

Finally, this study found significant evidence that SAFER is working very well in many respects. It is distributing benefits across communities with a disproportionate amount going towards communities with lower average incomes, as should be expected. Other than the mobility aspect, which requires further study, there are no significant sources of inequity in the distribution of the subsidy across communities. SAFER is a necessary and important part of the spectrum of BC Housing's programming, and although it may deserve a review with respect to the problems and solutions presented above, it remains a valuable program for seniors with income vulnerability.

Appendices

Appendix A: Comparable Shelter Subsidies in other Canadian Provinces

Two Canadian provinces have programs very similar to BC's SAFER program. Manitoba's program, also called SAFER, is most similar. The core differences are an eligibility age of 55, lower rent ceilings, and a rent-to-income ratio of 25% (they set a standard that assumes that individuals should spend no more than 25% of their earnings on rent.) Nova Scotia's program is similar as well, albeit with a 30% rent-to-income ratio. However, in Nova Scotia, the rent supplement is sent directly to the landlord, which increases the likelihood of stigma being associated with receipt of the program.

Other provinces have programs with similar characteristics but different eligibility or other requirements. Newfoundland, Ontario and New Brunswick have very similar programs to Nova Scotia, but there is no age requirement; any family that pays more than 30% of earnings to rent can be eligible. In both cases, landlords receive the subsidy. In these provinces, the units are pre-selected, (i.e., units are designated as participating in the program and remain as such even when the original residents move) and so the program does not operate completely within a market framework.

Quebec provides a cash grant of up to $80 per month to all individuals over 55 years, or all families, who have rent-to-income ratios of more than 30%. Alberta has public housing options (as do all the other programs mentioned), but has no equivalent to the SAFER program. Data was not available on Saskatchewan, PEI, and the territories. See the table on the following page for relevant program details and sources.

**Note: Does not include any public/non-profit housing options

Table A1: Comparable Shelter Subsidies in Other provinces

Province	Program Name/Link	Info
Manitoba	SAFER (bookmarked)	Very similar to BC, but 55 is age eligibility, and lower rent ceilings. 25% of income on rent is ratio. Max benefit is $170
New Brunswick	Rent Supplement Program (saved on file)	For all families- 30% is cutoff, or less than if living in substandard dwellings. Landlords receive payment directly. Rent adjusted for tenants to 30% of R-I-R.
Ontario	Private Rent Supplement (bookmarked)	For all people – 30% R-I-R. Devolved to municipalities January 2001. 14,200 rental units, of which 25% (3600) are seniors. $77.8 million budget for private program- 25% or $19.5 million is for seniors. Financed almost 50/50 by fed/prov.
Alberta	Senior Citizen's Self-Contained Housing Program SPPD	Have a program to put seniors in public housing units which cap rent at 30% of income, but no private rent supplement option.
NFLD/Labrador	Rent Supplement Program SPPD Bookmarked	Very similar to NB program, a certain # of private units are dedicated to this program. 25%-30% R-I-R. 1,014 recipients, $3.9 million spent.
Nova Scotia	Rent Supplement Program SPPD	Very similar to NB and NF, but only for seniors. 803 people in it, $3 million spent. Subsidy paid to landlords.
Quebec	Housing Allowance Program SPPD/ http://www.habitation.gou v.qc.ca/en/programmes/al location_logement.html#e ligibility	Grant of up to $80/month for those over 55 OR low-income families with RIR of 30%+
Quebec	Rent Supplement Program http://www.habitation.gou v.qc.ca/en/programmes/s upplement_loyer.html	Available only to selected households, but allows payments to make rent = 25%RIR

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Appendix B: Uncertainties in Data Merging Technique

Table B1: Uncertainties in merging technique

Year	City (in SAFER form)	Problem/Action	Result
2001	Canoe	Could have been in two CSD's	Based on map search, placed in Columbia-Shuswap C.
2001	Canyon	Could have been in multiple CSD's	Placed in Central Kootenay B
2001	Deroche	Two choices of CSD	Placed in Fraser Valley G based on map search
1996	Green Lake	Could have been in Thompson-Nicola B or D	Placed in Thompson-Nicola D, internet search
2001	Kumsheen	No listing in StatCan	Placed with Lytton based on internet search-
1996	Medena Park	No listing in StatCan or on Internet	Deleted case
1996, 2001	Mill Bay	Could have been in two places	Placed in Cowichan Valley A
1996	Mt. Lehman	No listing in StatCan	Web search said Abbotsford, placed there
1996, 2001	North Vancouver	Both a district and a city	Used the district municipality coding, deleted other listing
2001	Saltspring Island	Multiple CSD's reported; used StatCan map tool.	Placed in Capital F
2001	Silver Creek	Could have been two places; used closeness of data matching	Placed with Hope
1996	South Slocan	Could have been two CSD's, confirmed using map tool comparison with 2001	Placed in Slocan
2001	Tsawwassen	Could have been Indian reserve or community	Placed with community and part of Delta
2001	108 Mile House	No citing on StatCan;	Placed in Caribou A

Year	City (in SAFER form)	Problem/Action	Result
2001	Canoe	Could have been in two CSD's	Based on map search, placed in Columbia-Shuswap C.
2001	Canyon	Could have been in multiple CSD's	Placed in Central Kootenay B
2001	Deroche	Two choices of CSD	Placed in Fraser Valley G based on map search
1996	Green Lake	Could have been in Thompson-Nicola B or D	Placed in Thompson-Nicola D, internet search
2001	Kumsheen	No listing in StatCan	Placed with Lytton based on internet search-
1996	Medena Park	No listing in StatCan or on Internet	Deleted case
1996, 2001	Mill Bay	Could have been in two places	Placed in Cowichan Valley A
1996	Mt. Lehman	No listing in StatCan	Web search said Abbotsford, placed there
1996, 2001	North Vancouver	Both a district and a city	Used the district municipality coding, deleted other listing
2001	Saltspring Island	Multiple CSD's reported; used StatCan map tool.	Placed in Capital F
2001	Silver Creek	Could have been two places; used closeness of data matching	Placed with Hope
1996	South Slocan	Could have been two CSD's, confirmed using map tool comparison with 2001	Placed in Slocan
		internet search	

Appendix C: Data Source and Methodology Information

Refer to section 3.4 for the relevant discussion of data sources.

The following data runs were taken from the Canadian Census for the work:

Table C1: Census Cat. Data Sources

Yr. of Census	Data Area	StatsCan Census Cat. Code
2001	Age	95F0300XCB01006
2001	Income	95F0431XCB01006
2001	Housing Affordability	95F0444XCB01006
2001	Education	95F0491XCB01001
2001[10]	Mobility, and Language Status	95F0488XCB01001
1996	Age	95F0186XDB96001
1996	Income	95F0247XDB96001
1996	Housing Affordability	95F0200XDB96001
1996	Education	95F0226XDB96001
1996	Mobility	95F0194XDB96008D
1996[11]	Language Status	95F0213XDB96001

BC Housing provided two data runs, from January 1st, 1996 and January 1st, 2001. This data was provided at the individual level; the run collected data from every SAFER case file at that period. A random number identifier was assigned to each case to ensure confidentiality. All couples and room-sharers were then filtered out of the data, so as to standardize the BC Housing data at the level of the single recipient. Those paying boarding fees (e.g., food) on top of housing payments were also excluded. The following subtractions were made in order to reduce the data to single, non-room-and-board recipients:

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[10] 2001 data from Statistics Canada site:
http://www12.statcan.ca/english/census01/Products/Standard/Index.cfm
[11] 1996 data from SFU Research Data Library, Basic Summary Tables:
http://www.sfu.ca/rdl/dlib/data/survey/census/96census/96bst.html#TOP

Table C2: Case Reductions from SAFER files

	1996	2001
Initial Number of Cases	14899	14539
Couples/sharing (removed)	1229	1206
Singles paying room/board	1835	1919
Unknown	15	-
Remaining Cases (N)	11820	11414

Data Merging Notes

The following describes the manipulations that were performed to match the SAFER data files, aggregated at the community level, with the community-level data provided by the Canadian Census data.

Canadian census data had many geographical areas which were not reported in the SAFER datasets. For example, no SAFER recipients were from Indian Reserves; they were left as missing values for the SAFER-originated data. The CSD listing of place-names was substantially different from that reported by recipients, as recipients reported non-incorporated municipalities, where CSD's placed those into numbered regional sub-divisions (ie Thompson-Nicola Subd D.) The Statistics Canada place-name tool was used, for both the 1996 and 2001 datasets[12], to match the reported community with the CSD place-name. There were several instances where the merging was imperfect; these instances and their results are reported in Appendix A. There were many instances where two communities reported by applicants were in the same CSD; these instances had to be re-averaged based on all the communities in the CSD, to standardize every case to the CSD level.

Data Adjustments

Two adjustments were made for inconsistencies in the dataset. These adjustments increased the reliability of the data significantly. The Mill Bay files from both 1996 and 2001 needed adjustment; one recipient reported invalid income & benefit data. In that case, the individual file

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[12] Link to 1996 Statistics Canada place-name tool:
http://www12.statcan.ca/english/Profil/PlaceSearchForm1.cfm
     Link to 2001 Statistics Canada place-name tool:
http://www12.statcan.ca/english/profil01/PlaceSearchForm1.cfm

was removed from the analysis. The second adjusted variable, Nanoose Bay, was removed due to a high outlier and high improbability of the case being valid.

Other Data Notes

Independent variables were removed from the forced entry regression based primarily on two statistical criteria: multicollinearity and lack of significance. Variables that reported high VIF scores were considered collinear with another variable; that is, two independent variables varied so closely with each other that they negated each others' effect on the overall predictive ability of the model. Variables that had this characteristic were removed. Significance refers to the contribution of the independent variable to the model. If the variable is significant (Sig < 0.01), the variable is contributing to the strength of the model. Variables that are insignificant (Sig. $>$ 0.01) are not contributing in any significant way to explanations of the variation of the dependent variable, and can be dropped from the analysis. Variables that are insignificant have no interpretive meaning.

Appendix D: Diagnostic Tests

Benefit Variable

The dependent variable in this analysis is parametric, according to the Kolmogorov-Smirnov test. The analysis proceeded, using the forced entry method of multiple linear regression, by inputting all variables at once. The strength of the model (the adjusted R-squared) following this analysis was 0.791, suggesting that the independent variables in the model explained 79% of the change in the dependent variable. There is no heteroscedasticity or multi-collinearity in the data (all VIF scores<5).

Count Variable

The dependent variable in this analysis is also parametric, according to the Kolmogorov-Smirnov test. There was no multi-collinearity (all VIF scores < 5). However, a scatterplot examining the predicted standardized residuals against the actual residuals revealed some potential evidence of heteroscedasticity, although not enough to invalidate the model.

Appendix E: Original Forced Entry Regression Results

Table E1: BENEFIT, Original Forced Entry Regression Results

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			VIF
Population count, unstandardized	.000	.000	.024	.120	.905	62.031
Age Eligible Population as a % of Community	-.317	.296	-.065	-1.071	.285	5.661
Eligible Population, unstandardized	.000	.001	-.065	-.323	.747	61.424
SAFER take-up Recipients as % of Age-Eligible Pop'n	-2.110	.968	-.070	-2.180	.030	1.558
Average monthly incomes of 65+	.000	.004	-.005	-.117	.907	2.674
% of Units in community that are rented	-12.287	28.963	-.078	-.424	.672	52.020
Per-Capita Rental Units	-31.606	78.939	-.078	-.400	.689	57.745
% spending 30% or more RIR, per capita	31.012	15.376	.134	2.017	.045	6.733
Gov't Transfers as % of Income	.237	.438	.035	.542	.588	6.485
Incidence of low income in 1995/2000	.242	.361	.033	.671	.503	3.614
Average rent per community	-.016	.012	-.056	-1.252	.212	3.060
% with English not mother tongue	3.296	22.778	.006	.145	.885	2.999
Movers from 5 years ago, within community	4.545	16.410	.010	.277	.782	1.989
Movers within 5 years ago, outside ctty	-173.379	78.588	-.110	-2.206	.028	3.810
Age	.222	.232	.028	.957	.339	1.318
Average monthly income of SAFER recipients	-.283	.010	-.800	-28.635	.000	1.191
Average monthly Rent paid by SAFER recipients	.352	.017	.735	20.874	.000	1.893

a Dependent Variable: DEPENDENT- Benefit (avg)

Table E2: Take-up, Original Forced-Entry Regression Results

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			VIF
Population count, unstandardized	.000	.000	-.448	-1.234	.218	61.719
Age Eligible Population as a % of Community	-.001	.018	-.006	-.050	.960	5.661
Eligible Population, unstandardized	.000	.000	.420	1.164	.245	61.148
Average monthly incomes of 65+	.000	.000	-.054	-.717	.474	2.669
% of Units in community that are rented	-5.446	1.696	-1.051	-3.211	.001	50.297
Per-Capita Rental Units	8.492	4.676	.634	1.816	.070	57.119
% spending 30% or more RIR, per capita	2.211	.907	.289	2.438	.015	6.603
Gov't Transfers as % of Income	-.043	.026	-.193	-1.651	.100	6.426
Incidence of low income in 1995/2000	.084	.021	.342	3.997	.000	3.432
Average rent per community	.000	.001	-.008	-.094	.925	3.060
% with English not mother tongue	.891	1.356	.053	.657	.512	2.994
Movers from 5 years ago, within community	4.048	.949	.270	4.265	.000	1.876
Movers within 5 years ago, outside ctty	-11.225	4.636	-.216	-2.421	.016	3.737
Age	.039	.014	.148	2.836	.005	1.283
Average monthly income of SAFER recipients	.000	.001	-.003	-.063	.950	1.191
Average monthly Rent paid by SAFER recipients	.001	.001	.087	1.376	.170	1.881

a Dependent Variable: DEPENDENT- Take-up, as % of eligible population

Appendix F: Final (Manipulated) Forced Entry Regression Results

Table F1: Co-efficients of Benefit Variable

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			VIF
Age (avg)	.220	.230	.028	.954	.341	1.306
Income of SAFER recipients (avg, monthly)	-.283	.010	-.800	-28.766	.000	1.186
Average monthly rent paid by SAFER recipients	.351	.017	.735	20.977	.000	1.884
Age Eligible Population as a % of Community	-.376	.264	-.077	-1.423	.156	4.529
Eligible Population, unstandardized	.000	.000	-.041	-1.090	.277	2.121
SAFER Recipients as % of Age-Eligible Pop'n	-2.168	.955	-.072	-2.269	.024	1.528
AVERAGE INCOMES of 65+, Monthly	-.001	.004	-.009	-.210	.834	2.538
% of Units in CTTY that are RENTED	-23.164	9.202	-.148	-2.517	.012	5.282
% spending 30% or more RIR, per capita Respondents	28.887	14.535	.125	1.987	.048	6.053
Gov't Transfers as % of Income	.261	.433	.039	.601	.548	6.390
INCIDENCE OF LOW INCOME IN 1995/2000	.228	.358	.031	.636	.525	3.579
AVERAGE RENT PER COMMUNITY	-.014	.012	-.051	-1.184	.237	2.896
% with English not mother tongue	4.129	22.611	.008	.183	.855	2.973
Movers from 5 years ago, within community	3.613	16.227	.008	.223	.824	1.956
Movers within 5 years ago, outside ctty	-170.992	78.039	-.109	-2.191	.029	3.779

a Dependent Variable: DEPENDENT- Benefit (avg)

Table F2: Co-efficients for take-up Variable

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			VIF
Age (avg)	.041	.014	.157	3.006	.003	1.268
Income of SAFER recipients (avg, monthly)	.000	.001	-.003	-.064	.949	1.186
Act.Rent/R&B (avg)	.002	.001	.095	1.499	.135	1.870
Age Eligible Population as a % of Community	.018	.016	.114	1.154	.249	4.509
Eligible Population, raw	.000	.000	-.023	-.338	.736	2.120
AVERAGE INCOMES of 65+, Monthly	.000	.000	-.015	-.200	.841	2.537
% of Units in CTTY that are RENTED	-2.597	.533	-.501	-4.875	.000	4.898
% spending 30% or more RIR, per capita Respondents	2.883	.858	.377	3.361	.001	5.835
Gov't Transfers as % of Income	-.051	.026	-.229	-1.963	.051	6.310
INCIDENCE OF LOW INCOME IN 1995/2000	.089	.021	.365	4.274	.000	3.375
AVERAGE RENT PER COMMUNITY	.000	.001	-.052	-.661	.509	2.892
% with English not mother tongue	.606	1.359	.036	.446	.656	2.971
Movers from 5 years ago, within community	4.432	.942	.295	4.706	.000	1.823
Movers within 5 years ago, outside ctty	-12.376	4.638	-.238	-2.668	.008	3.692

a Dependent Variable: DEPENDENT- Take-up, as % of eligible population

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