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SELECTED STATISTICS
FROM THE
HOUSING ALLOWANCE DEMAND EXPERIMENT

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SELECTED STATISTICS FROM THE
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This note presents a brief overview of the Demand Experiment, together with
selected tabulations of key variables, culled from the various analytic
reports. It is intended to provide an introductory guide to analysts in
terms of sample design, sample sizes, and magnitudes of response. The note
is organized as follows.

1   PURPOSE OF THE DEMAND EXPERIMENT

The Demand Experiment is one of three experiments established by the U.S.
Department of Housing and Urban Development (HUD) as part of the Experimental
Housing Allowance Program.[1] The purpose of these experiments is to test and
refine the concept of housing allowances.

Under a housing allowance program, money is given directly to individual low-

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[1]The other two experiments are the Housing Allowance Supply Experi-
ment and the Administrative Agency Experiment.

income households to assist them in obtaining adequate housing in the private market. The allowance may be linked to housing either by making the amount of the allowance depend on the amount of rent paid or by requiring that households meet certain housing requirements in order to receive the allowance payment. The initiative in using the housing and the burden of meeting housing requirements are placed upon households rather than upon developers, landlords, or the government.

The housing allowance experiments are intended to assess the desirability, feasibility, and appropriate structure of a housing allowance program. Housing allowances could be less expensive than some other kinds of housing programs. Allowances permit fuller utilization of existing sound housing because they are not tied to new construction. Housing allowances may also be more equitable. The amount of the allowance can be adjusted to changes in income without forcing the household to change units. Households may also, if they desire, use their own resources (either by paying higher rent or by searching carefully) to obtain better housing than is required to qualify for the allowance. As long as program requirements are met, housing allowances offer households considerable choice in selecting housing most appropriate to their needs—for example, where they live (opportunity to locate near schools, near work, near friends or relatives, or to break out of racial and socioeconomic segregation) or the type of unit they live in (single-family or multifamily). Finally, housing allowances may be less costly to administer. Program requirements need not involve every detail of participant housing and the burden of obtaining housing that meets essential requirements is shifted from program administrators to participants.

These potential advantages have not gone unquestioned. Critics of the housing allowance concept have suggested that low-income households may lack the expertise necessary to make effective use of allowances; that the increased supply of housing needed for special groups such as the elderly will not be provided without direct intervention; and that an increase in the demand for housing without direct support for the construction of new units could lead to a substantial inflation of housing costs.[1]

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[1]The issue of inflation is being addressed directly as part of the Housing Allowance Supply Experiment.

If housing allowances prove desirable, they could be implemented through a wide range of possible allowance formulas, housing requirements, nonfinancial support (such as counseling), and administrative practices. The choice of program structure could substantially affect both the program's cost and impact.

The Demand Experiment addresses issues of feasibility, desirability, and appropriate structure by measuring how individual households (as opposed to the housing market or administrative agencies) react to various allowance formulas and housing standards requirements. The analyses and reports are designed to answer six policy questions:

1. Participation

    Who participates in a housing allowance program? How does the form of the allowance affect the extent of participation for various households?

2. Housing Improvements

    Do households that receive housing allowances improve the quality of their housing? At what cost? How do households that receive a housing allowance seek to improve their housing--by moving, by rehabilitation? With what success?

3. Locational Choice

    For participants who move, how does their locational choice compare with existing residential patterns? Are there nonfinancial barriers to the effective use of a housing allowance?

4. Administrative Issues

    What administrative issues and costs are involved in the implementation of a housing allowance program?

5. Form of Allowance

    How do the different forms of housing allowance compare in terms of participation, housing quality achieved, locational choice, costs (including administrative costs), and equity?

6. Comparison With Other Programs

    How do housing allowances compare with other housing programs and with income maintenance in terms of participation, housing quality achieved, locational choice, costs (including administrative costs), and equity?

The Demand Experiment tests alternative housing allowance programs to pro-
vide information on these policy issues. While the experiment is focused
on household behavior, it also offers data on program administration to
supplement information gained through the Administrative Agency Experiment.
Finally, the Demand Experiment gathers direct information on participants
and housing conditions for a sample of households in conventional HUD-as-
sisted housing programs at the two experimental sites for comparison with
allowance recipients.

2   DESIGN OF THE DEMAND EXPERIMENT

The Demand Experiment tested a number of combinations of payment formulas
and housing requirements and several variations within each of these com-
binations. These variations allow some possible program designs to be
tested directly. More importantly, they allow estimation of key responses
such as participation rates and changes in participant housing in terms of
basic program parameters such as the level of allowances; the level and
type of housing requirements; the minimum fraction of its own income that
a household can be expected to contribute toward housing; and the way in
which allowances vary with household income and rent. These response esti-
mates can be used to address the policy questions for a larger set of can-
didate program plans, beyond the plans directly tested.[1]

Payment Formulas

Two payment formulas were used in the Demand Experiment--Housing Gap and
Percent of Rent.

Under the Housing Gap formula, payments to households constitute the dif-
ference between a basic payment level, C, and some reasonable fraction of
family income. The payment formula is:

$$P = C - bY$$

where P is the payment amount, C is the basic payment level, "b" is the
rate at which the allowance is reduced as income increases, and Y is the

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[1]The basic design and analysis approach, as approved by the HUD
Office of Policy Development and Research, is presented in Abt Associates
Inc. (August 1973, June 1973). Details of the operating rules of the Demand
Experiment are contained in Abt Associates Inc. (April 1973).

net family income.[1] The basic payment level, C, varies with household size, and is proportional to C*, the estimated cost of modest existing standard housing at each site.[2] Thus, payment under the Housing Gap formula can be interpreted as making up the difference between the cost of decent housing and the amount of its own income that a household should be expected to pay for housing.[3]

Under the Percent of Rent formula, the payment is a percentage of the household's rent. The payment formula is:

$$P = aR$$

where R is rent and "a" is the fraction of rent paid by the allowance. In the Demand Experiment the value of "a" remained constant once a household had been enrolled.[4]

Housing Requirements

The Percent of Rent payment formula is tied directly to rent: a household's allowance payment is proportional to the total rent. Under the Housing Gap formula, however, specific housing requirements are needed to tie the allowance to housing. Two types of housing requirement were used: Minimum Standards and Minimum Rent.

Under the Minimum Standards requirement, participants received the allowance payment only if they occupied dwellings that met certain physical and occu-

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[1] In addition, whatever the payment calculated by the formula, the actual payment cannot exceed the rent paid.

[2] The housing cost parameter, C*, was established from estimates given by a panel of qualified housing experts in Pittsburgh and Phoenix. For more detailed discussion regarding the derivation of C*, refer to Abt Associates Inc. (January 1975), Appendix II.

[3] As long as their housing met certain requirements (discussed below), Housing Gap households could spend more or less than C* for housing, as they desired, and hence contribute more or less than "b" of their own income. This is in contrast to other housing programs, such as Section 8 (Existing).

[4] Five values of "a" were used in the Demand Experiment. Once a family had been assigned its "a" value, the value generally stayed constant in order to aid experimental analysis. In a national Percent of Rent program, "a" would probably vary with income and/or rent. Even in the experiment, if a family's income rose beyond a certain point, the value of "a" dropped rapidly to zero. Similarly, the payment under Percent of Rent could not exceed C* (the maximum payment under the modal Housing Gap plan), which effectively limited the rents subsidized to less than C*/a.

pancy standards. Participants occupying units that did not meet these stand-
ards either had to move or arrange to improve their current units to meet the
standards. Participants already living in housing that met standards could
use the allowance to pay for better housing or to reduce their rent burden
(the fraction of income spent on rent) in their present units.

If housing quality is broadly defined to include all residential services,
and if rent levels are highly correlated with the level of services, then a
straightforward housing requirement (and one that is relatively inexpensive
to administer) would be that recipients spend more than some minimum amount
on rent. Minimum Rent was considered as an alternative to Minimum Standards
in the Demand Experiment, in order to observe differences in response and
cost and to assess the relative merits of the two types of requirements. Al-
though the design of the experiment used a fixed minimum rent for each house-
hold size, a direct cash assistance program could employ more flexible struc-
tures. For example, some features of the Percent of Rent formula could be
combined with the Minimum Rent requirement. Instead of receiving a zero al-
lowance if their rent is less than the Minimum Rent, households might be paid
a fraction of their allowance depending on the fraction of Minimum Rent paid.

Allowance Plans Tested

The three combinations of payment formulas and housing requirements used in
the Demand Experiment were Housing Gap Minimum Standards, Housing Gap Mini-
mum Rent, and Percent of Rent. A total of 17 allowance plans were tested.

The twelve Housing Gap allowance plans are shown in Table 1. The first nine
plans include three variations in the basic payment level, C (1.2C*, C*, and
0.8C*) and three variations in housing requirements (Minimum Standards, Min-
imum Rent Low (0.7C*), and Minimum Rent High (0.9C*)). The value of "b"--
the rate at which the allowance is reduced as income increases--is 0.25 for
each of these plans. The next two plans have the same level of C (C*) and
use the Minimum Standards Housing Requirement, but use different values of
"b". In the tenth plan the value of "b" is 0.15, and in the eleventh plan,
0.35. Finally, the twelfth plan is Unconstrained, that is, it has no hous-
ing requirement. This Unconstrained plan allows a direct comparison with a
general income-transfer program.

Eligible households that did not meet the housing requirement were still
able to enroll. They received full payments whenever they met the require-

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ments during the three years of the experiment. Even before meeting the housing requirements, such households received a cooperation payment of $10 per month as long as they completed all reporting and interview requirements.

Within the Housing Gap design, the average effects of changes in the allowance level or housing requirements can be estimated for all the major responses. In addition, interactions between the allowance level and the housing requirement can be assessed. Responses to variations in the allowance/income schedule (changes in "b") can be estimated for the basic combination of the Minimum Standards housing requriment and payment level of C*.

The Percent of Rent allowance plans consist of five variations in "a" (the proportion of rent paid to the household), as shown in Table 1.[1] A demand function for housing is estimated primarily from the Percent of Rent observations. Demand functions describe the way in which the amount people will spend on housing is related to their income, the relative price of housing and other goods, and various demographic characteristics. Such functions may be used to simulate response to a variety of possible rent subsidy programs not directly tested within the Demand Experiment. Together with estimates of supply response, they may also be used to simulate the change in market prices and housing expenditures over time due to shifts in housing demand or costs.

Control Groups

In addition to the various allowance plans, Control groups were necessary in order to establish a reference level for responses, since a number of uncontrolled factors could also induce changes in family behavior during the course of the experiment. Control households received a cooperation payment of $10 per month. They reported the same information as families that received allowance payments, including household composition and income; they permitted housing evaluations; and they completed the Baseline Interview and the three Periodic Interviews. (Control families were paid an additional $25 fee for each Periodic Interview.)

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[1] Designation of multiple plans for the same "a" value reflects an early assignment convention and does not indicate that the households in these plans were treated differently for either payment purposes or analysis.

Table 1
ALLOWANCE PLANS TESTED
(Kennedy, 1980, Table I-1)

HOUSING GAP: $(P = C - bY$, where C is a multiple of $C^*)$

b VALUE	C LEVEL	HOUSING REQUIREMENTS			
		Minimum Standards	Minimum Rent Low = $0.7C^*$	Minimum Rent High = $0.9C^*$	No Requirement
b = 0.15	C^*	Plan 10			
	$1.2C^*$	Plan 1	Plan 4	Plan 7	
b = 0.25	C^*	Plan 2	Plan 5	Plan 8	Plan 12
	$0.8C^*$	Plan 3	Plan 6	Plan 9	
b = 0.35	C^*	Plan 11			

Symbols: b = Rate at which the allowance decreases as the income increases.

C^* = Basic payment level (varied by family size and also by site).

PERCENT OF RENT $(P = aR)$:

a = 0.6	a = 0.5	a = 0.4	a = 0.3	a = 0.2
Plan 13	Plans 14 - 16	Plans 17 - 19	Plans 20 - 22	Plan 23

CONTROL:

With Housing Information	Without Housing Information
Plan 24	Plan 25

Two Control groups were used in the Demand Experiment. Members of one group (Plan 24) were offered a Housing Information Program when they joined the experiment and were paid $10 for each of five sessions attended. (This program was also offered to households enrolled in the experimental allowance plans but they were not paid for their attendance.) The other Control group (Plan 25) was not offered the Housing Information Program.

3 SAMPLE SELECTION IN THE DEMAND EXPERIMENT

The Sites

The Demand Experiment was conducted in two sites, Allegheny County, Pennsylvania (Pittsburgh) and Maricopa County, Arizona (Phoenix).[1] These sites were selected by HUD from among 31 Standard Metropolitan Statistical Areas (SMSAs) on the basis of their growth rates, rental vacancy rates, degree of racial concentration, and housing costs. Each site had a large enough population and rental market to accommodate the experimental programs without materially changing either the total demand for, or the supply of, rental housing. As indicated in Table 2, the households enrolled in the Demand Experiment constituted less than 5 percent of the eligible low-income renter households and less than 2 percent of total renter households in each site. Otherwise, however, the two sites were very different in several respects.

At the time of the Demand Experiment, the Pittsburgh SMSA was an older Northeastern urban area, with a stable overall population, a declining Central City, and a moderate rental vacancy rate. The population of the Pittsburgh SMSA was almost unchanged from 1960 to 1970, while the population of the City of Pittsburgh declined by about 14 percent. In the years immediately before the completion of enrollment in the Demand Experiment (1970 to 1974), the number of renter-occupied housing units fell by about 1 percent, while the rental vacancy was fairly stable at 5 to 6 percent.

The Phoenix SMSA, in contrast, was a newer Southwestern urban area, with a rapidly growing population, substantial new construction, and fairly high rental vacancy rates. The population of the Phoenix SMSA grew 46 percent from 1960 to 1970, while that of the City of Phoenix grew 32 percent. In

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[1] In this, as in all Demand Experiment reports, the two sites are referred to by their city names (Pittsburgh and Phoenix). Unless specifically indicated, these always refer to the entire county rather than the city proper.

Table 2

SELECTED DESCRIPTORS OF
DEMAND EXPERIMENT SITES
(Kennedy, 1980, Table I-2)

LOCAL HOUSING MARKETS	PITTSBURGH		PHOENIX	
	SMSA[a]	CITY	SMSA[a]	CITY
POPULATION				
1960	2,405,400	604,300	663,500	439,200
1970	2,401,200	520,100	969,400	581,600
Percentage Change	-0.17%	-13.9%	+46.1%	+32.4%
YEAR ROUND HOUSING UNITS	PITTSBURGH SMSA		PHOENIX SMSA	
1970	788,600		317,000	
1974	822,500		462,000	
Percentage Change 1970-1974	4.3%		45.7%	
OCCUPIED RENTAL UNITS				
1970	245,100		101,900	
1974	244,800		129,200	
Percentage Change 1970-1974	-0.1%		+26.8%	
RENTAL VACANCY RATE				
1970	5.9%		7.5%	
1974	5.1%		14.4%	
DEMAND EXPERIMENTAL EN-ROLLMENT IN RELATION TO LOCAL HOUSING MARKETS	ALLEGHENY COUNTY (Pittsburgh)		MARICOPA COUNTY (Phoenix)	
Households enrolled in the Demand Experiment (1974)[b]	1,645		1,780	
AS A PERCENT OF:				
Estimated eligible renter households not in other subsidized housing (1970 Census)	4.0%		4.8%	
(N)	(40,700)		(36,800)	
Total number of occupied rental units	0.9%		1.7%	
(N)	(179,400)		(101,900)	
Total number of occupied dwellings	0.3%		0.6%	
(N)	(512,500)		(302,600)	

DATA SOURCE: Annual Housing Survey, Table 1.

a. The Pittsburgh SMSA is larger than Allegheny County (the area in which the Demand Experiment was conducted). Allegheny County had a population of 1,605,016 in 1970, 1.4 percent less than in 1960. The Phoenix SMSA is identical with Experimental boundaries in that site (Maricopa County).

b. Excludes certain enrolled households that were ineligible at enrollment.

the years immediately prior to the completion of enrollment in the Demand Experiment, the number of renter-occupied units grew by 27 percent. At the same time, the rental vacancy rate increased substantially, from 7.5 percent in 1970 to 14.4 percent in 1974.

Eligible Households

Households enrolled in the Demand Experiment were selected from potentially eligible households in each site. Potentially eligible households consisted of all renter households in Allegheny or Maricopa Counties with incomes[1] at or below the program income eligibility limits, excluding nonelderly single person households,[2] members of the armed forces, full-time students, and households already receiving federal housing assistance or residing in blocks scheduled for demolition and relocation. Income eligibility limits included basic limits, which applied to all households and special limits, which applied only to certain allowance plans.

The basic income eligibility limits were set equal to the income level at which a household would receive no payment under the basic Housing Gap plan (Plans 2, 5, 8, and 12 in Table 1), where monthly payments (P) were equal to the difference between the estimated monthly cost of modest existing standard housing for various household sizes in each site (C*) and 25 percent of the household's monthly income (Y)--that is,

$$P = C* - .25Y.$$

The basic monthly income limits, therefore, were given by 4 times C* and the annual limits by 48 times C*. Actual annual values are shown in Table 3. The estimated cost of standard housing (C*), and hence the income limits, were from 20 to 40 percent higher in Phoenix than in Pittsburgh.

These basic income eligibility limits applied to all households.[3] In addi-

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[1]For program purposes, net income was defined as total earnings from all sources (excepting the value of Food Stamps, but including welfare, Social Security, and alimony or child support), net of taxes and alimony payments and deductions for work-related expenses.

[2]Disabled nonelderly single person households were eligible in Phoenix but not in Pittsburgh.

[3]The only exception was Control households. Eligibility limits for Controls were higher in order to provide a group of higher income households. Direct comparisons between Controls and Experimentals generally exclude these households.

Table 3

MODAL INCOME ELIGIBILITY LIMITS AT ENROLLMENT
(Kennedy, 1980, Table I-3)

SITE	HOUSEHOLD SIZE				
	1	2	3-4	5-6	7+
Pittsburgh	$5,050	$5,800	$6,750	$ 7,700	$ 9,150
Phoenix	6,000	7,450	8,650	10,600	12,750

Table 4

REVISED MODAL INCOME ELIGIBILITY LIMITS
(Kennedy, 1980, Table I-4)

SITE	HOUSEHOLD SIZE				
	1	2	3-4	5-6	7+
Pittsburgh	$5,540	$6,260	$7,220	$ 8,180	$ 9,860
Phoenix	6,500	7,940	9,140	11,300	13,460

NOTE: Indicated amounts are $500 greater than formal eligibility limits. A $500 margin of error is allowed. Only households with incomes more than $400 above the formal limits are considered to be overincome.

tion, there were special limits for households assigned to certain allowance plans. Specifically, households in Housing Gap plans with lower payment levels (Plans 3, 6, 9 and 11) had to have incomes at enrollment low enough to receive payment under these plans. Further, only households with incomes in the lower third of the eligible population were eligible for enrollment in Plan 13 (the 60 percent Percent of Rent rebate) and only those with incomes in the upper two-thirds were eligible for Plan 23 (the 20 percent Percent of Rent rebate). The C* schedule and eligibility limits were revised approximately 12 months after the end of enrollment to reflect rent inflation. The revised income limits, shown in Table 4, remained in effect for the rest of the experiment. These revised limits only affected continuing eligibility, which was determined differently from initial eligibility for enrollment.

To be eligible for enrollment, a household's annual income for the 12 months prior to enrollment had to be at or below the eligibility limits. Thereafter, however, changes in income only affected payments. Payments to households assigned to the Housing Gap plan were automatically adjusted for changes in household income. If a household's income rose above the eligibility limits in any month, it could still receive $10 for completing monthly reporting requirements (like the Control households). If its income later again fell below the eligibility limits, it would begin to receive larger payments. Under the Percent of Rent plans, of course, monthly payments were not directly affected by household income. Accordingly, payments under these plans were only reduced if a household's monthly income rose above 4.8C* and fell to zero at incomes of 6.67C*.[1]

Sampling Procedures

The sampling process is summarized in Table 5. It started with a listing of all dwelling units in selected blocks. The blocks chosen were cluster samples of blocks in census tracts with median (1970 Census) household incomes

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[1]The actual calculation, almost never invoked, was that for monthly incomes above 4.8C*, payments were calculated on the basis of a_p, where

$$a_p = \left(\frac{6.667C* - Y}{6.667C* - 4.8C*} \right) a$$

where C* is the estimated cost of standard housing, a is the normal Percent of Rent rebate, and Y is household income.

Table 5

SUMMARY OF THE SAMPLE SELECTION PROCESS
(Kennedy, 1980, Table I-5)

	NUMBER OF HOUSEHOLDS	
	PITTSBURGH	PHOENIX
STEP IN SAMPLING PROCESS		
Units listed	Approximately 150,000	Approximately 150,000
Screening interviews completed	50,938	43,341
Apparently eligible households assigned to Baseline Interviews	5,439	5,748
Households that completed the Baseline Interview and were still apparently eligible (names sent to site for enrollment)	4,127	3,834
Households that accepted enrollment and were verified eligible[a]	1,645	1,780

SOURCE: Abt Associates Inc. (1974), pp. 47-49, and Abt Associates Inc. (February 1975), pp. 124-129.

a. Some Control households (65 in Pittsburgh and 51 in Phoenix) were enrolled with incomes above the basic eligibility limits to provide additional data. In addition, towards the end of the enrollment process, it became worthwhile to enroll some households before income verification was completed. This permitted the analytic period to begin earlier at the cost of enrolling some over income households in various allowance plans. These households were not, however, used in analysis and are not included here, though they sometimes appear in other published enrollment figures.

of less than $12,000, except that blocks where less than 10 percent of the units were renter-occupied or where there were fewer than five renter occupied units were excluded, as well as blocks scheduled for demolition and blocks containing federally subsidized low-income housing (including Section 23 units). This listing gave a sample of about 150,000 units in each site.

Samples of eligible households were then drawn from this list of units by means of a series of interviews. A brief screening interview was used to identify apparently eligible low-income renter households in this sample. As shown in Table 5, about 90,000 Screening Interviews were required to produce a sample of about 11,000 apparently eligible households. These households were then randomly assigned to the various experimental programs and Control groups[1] and re-interviewed to provide Baseline data on the households' pre-enrollment situation.[2] This yielded a sample of about 8,000 still apparently eligible households with completed Baseline Interviews.

Households that completed the Baseline Interviews and were still apparently eligible were then approached by site office staff and offered enrollment in the experiment. This was the first time that households were told about the Demand Experiment. The eligibility of households that accepted enrollment was then reviewed in detail based on current information provided by the households as well as verification of reported income by income sources (employers, government agencies, and so forth). The net result of this pro-

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[1]If a household passed basic eligibility limits, but not the special eligibility limits for its assigned plan, it was excluded from the sample. In addition, in order to achieve enrollment targets within each plan as closely as possible, initial samples of listed units were broken into from eight to 17 subsamples, which were then interviewed in sequence. In this way, the outcomes from earlier subsamples could be used to determine the sampling proportions used to allocate later subsamples to the different allowance plans. This procedure preserved random assignment while still allowing targets for the number of enrolled households in each plan to be met (within 10 percent).

[2]Most of the Screening and Baseline Interviews were conducted by the National Opinion Research Center (NORC) under subcontract to Abt Associates. All interviews used a variety of procedures to assure that all selected households had an equal opportunity to complete the interview (including mail, phone and personal attempts to arrange for an interview at various times of day and days in the week) and were conducted by fully trained interviewers subject to extensive quality control procedures. Neither interviewers nor respondents knew the allowance plan to which the household was assigned. Nor were respondents told about the experiment until some time after interviews were completed. The minimum completion rate on each interview was 80 percent.

cess was the enrollment of 3,425 eligible experimental and Control households and Control households in the two sites (1,645 in Pittsburgh and 1,780 in Phoenix). The enrollment process ran from April 1973 to March 1973, with the bulk of enrollment completed between November and March.

Selected demographic characteristics of enrolled households are shown in Table 6. Minorities made up from one-fourth to one-third of the enrolled households in each site. Minority households were almost entirely black in Pittsburgh and predominantly Spanish American in Phoenix. While Pittsburgh households tended to be somewhat older, the age distribution in the two sites was not dramatically different; roughly half were younger households (with heads of household less than 35 years old) while about one-fifth were elderly households (with heads aged 62 or more). The distribution of household sizes was also quite similar across the two sites. About 20 percent were large households with five or more members, while 15 percent were single person households (almost exclusively confined, under the program rules, to elderly households). Household income was somewhat higher in Phoenix than in Pittsburgh, due to the higher Phoenix eligibility limits. Overall, the average and median incomes were both about $4,500. Almost 90 percent of households had incomes less than or equal to twice the poverty level, while 45 percent were in poverty (as compared, for example, to 15 percent of all U.S. households in 1969). There were major differences in the distribution of sources of household income in the two sites. Earnings were the major source of income for two-thirds of the enrolled households in Phoenix, as compared with one-third in Pittsburgh. Correspondingly, over a third of the households in Pittsburgh had welfare as their major source of income as opposed to only 10 percent in Phoenix.[1] The remaining important category, Other Transfers, was also somewhat more prevalent in Pittsburgh.[2]

There are few substantial differences between the demographic profiles of enrolled households and the estimated profile of all eligible households

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[1] This difference is not simply due to the higher income limits in Phoenix. Among households with incomes below poverty, earnings were the major source of income for 11 percent and welfare for 64 percent in Pittsburgh as compared with 39 and 28 percent, respectively, in Phoenix.

[2] This category consists of a variety of institutional transfers such as pensions, Social Security, SSI, Workmen's Compensation, and Unemployment Insurance. This category was the major source of income for 85 percent of elderly households as compared to 7 percent of nonelderly households.

Table 6

SELECTED DEMOGRAPHIC CHARACTERISTICS OF ENROLLED HOUSEHOLDS
(Kennedy, 1980, Table I-6)

	COMBINED SITES	PITTSBURGH	PHOENIX
RACE/ETHNICITY OF HEAD OF HOUSEHOLD			
Percent white	71%	76%	66%
Percent black	15	24	7
Percent Spanish American	13	0	24
Percent other	2	1	3
AGE OF HEAD OF HOUSEHOLD			
Less than 35 years	48	42	54
35 to 61 years	30	32	27
Greater than 61 years	22	26	19
HOUSEHOLD SIZE			
1	15	18	13
2	26	25	26
3-4	38	37	39
5-6	14	14	14
7+	7	5	8
HOUSEHOLD INCOME			
Mean income	$4,632	$4,168	$5,057
Median income	4,445	3,996	4,992
Percent in poverty[a]	45%	55%	36%
Percent twice poverty or below[a]	89	97	83
MAJOR SOURCE OF INCOME[b]			
Earnings	51	33	67
Welfare	23	37	10
Other transfers	24	28	21
Other	2	2	2
SAMPLE SIZE	3,334	1,595	1,739

SAMPLE: Enrolled households excluding those over-income or in owned homes or subsidized housing at enrollment, as well as households with missing income data or with reported incomes of less than $1,000 per year.

a. Poverty Income limits are based on the 1974 poverty matrix for male-headed urban households (by elderly and nonelderly status). The use of male-headed values modestly inflates the proportion of households classified as being in poverty. For the values used, see Budding (1978), Appendix II.

b. Major Source of Income Categories are defined as follows:

Earnings = salaries, wages, and net business income
Welfare = payments from AFDC, General Assistance, and other welfare, plus the bonus value of Food Stamps
Other Transfers = pensions, Social Security, SSI, Workman's Compensation, and Unemployment Insurance
Other = other income from assets, alimony, gifts, charity, and so forth.

The major source is the source that accounts for the largest share of a household's income.

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based on 1970 Census data. Indeed, such differences as these apparently reflect differences in data collection and definition, and changes in population between 1970 and 1973 as much as differences in households' willingness to be interviewed or accept the enrollment offer.[1] Most important, it appears that enrollment was not directly affected by a household's housing situation.[2] Thus, the households enrolled in the Demand Experiment provide a good picture of the housing needs of low-income households in each site.

Allocations to the Experimental Allowance Plans

Tables 7 and 8 show the sample sizes at enrollment and at the end of two years. Sample sizes at enrollment include all eligible households. Samples at two years include all eligible enrolled households still in the experiment two years after enrollment, regardless of their income eligibility. Overall, 74 percent of the enrolled sample in Pittsburgh and 56 percent in Phoenix were still actively enrolled in the Experiment at the end of two years. At least some of the attrition in the sample was due to changes in household circumstances rather than a direct decision to drop out of the Experiment. Thus, for example, households that moved out of the county were dropped from the experiment unless they moved back within three months. While this decision did involve giving up the Experiment, it seems unlikely that it was materially affected by the allowance.

Table 9 shows retention rates for the major experimental groups, first based on all enrolled households, and then excluding households that were known to have been dropped from the experiment due to changes in circumstances. The "voluntary" retention rates reflected in the second calculation are, of course, higher--about 88 percent in Pittsburgh and 77 percent in Phoenix. Nevertheless, sample losses over two years were large enough to raise concerns about the effects of self-selection and differential attrition across the different allowance plans. These were addressed directly in the various analyses of household responses.

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[1]See Abt Associates Inc. (February 1975), pp. 34-38, 84-113.

[2]See Kennedy and MacMillan (1979), Chapter 3.

Table 7

SAMPLE SIZE AT ENROLLMENT
(Kennedy, 1980, Table I-7)
HOUSING GAP: (P = C - bY, where C is a multiple of C*)

b VALUE	C LEVEL	HOUSING REQUIREMENTS			
		Minimum Standards	Minimum Rent Low = 0.7C*	Minimum Rent High = 0.9C*	No Requirement
b = 0.15	C*	Plan 10 PIT = 57 PHX = 64			
b = 0.25	1.2C*	Plan 1 PIT = 43 PHX = 48	Plan 4 PIT = 43 PHX = 42	Plan 7 PIT = 45 PHX = 43	
	C*	Plan 2 PIT = 59 PHX = 74	Plan 5 PIT = 62 PHX = 70	Plan 8 PIT = 67 PHX = 78	Plan 12 PIT = 75 PHX = 70
	0.8C*	Plan 3 PIT = 62 PHX = 66	Plan 6 PIT = 61 PHX = 63	Plan 9 PIT = 67 PHX = 70	
b = 0.35	C*	Plan 11 PIT = 60 PHX = 77			

Total Housing Gap: 701 households in Pittsburgh, 765 households in Phoenix.

Symbols: b = Rate at which the allowance decreases as the income increases.

               C* = Basic payment level (varied by family size and also by site).

PERCENT OF RENT (P = aR) :

a = 0.6	a = 0.5	a = 0.4	a = 0.3	a = 0.2
Plan 13 PIT = 34 PHX = 32	Plans 14 - 16 PIT = 121 PHX = 114	Plans 17 - 19 PIT = 145 PHX = 120	Plans 20 - 22 PIT = 118 PHX = 140	Plan 23 PIT = 92 PHX = 84

Total Percent of Rent: 510 households in Pittsburgh, 490 households in Phoenix.

CONTROLS:

With Housing Information	Without Housing Information
Plan 24 PIT = 210 PHX = 262	Plan 25 PIT = 224 PHX = 263

Total Controls: 434 households in Pittsburgh, 525 households in Phoenix.

Table 8

SAMPLE SIZE AFTER TWO YEARS
(Kennedy, 1980, Table I-8)

HOUSING GAP: (P = C - bY, where C is a multiple of C*)

b VALUE	C LEVEL	HOUSING REQUIREMENTS			
		Minimum Standards	Minimum Rent Low = 0.7C*	Minimum Rent High = 0.9C*	No Requirement
b = 0.15	C*	Plan 10 PIT = 45 PHX = 36			
b = 0.25	1.2C*	Plan 1 PIT = 33 PHX = 30	Plan 4 PIT = 34 PHX = 24	Plan 7 PIT = 30 PHX = 30	
	C*	Plan 2 PIT = 42 PHX = 35	Plan 5 PIT = 50 PHX = 39	Plan 8 PIT = 44 PHX = 44	Plan 12 PIT = 63 PHX = 40
	0.8C*	Plan 3 PIT = 43 PHX = 39	Plan 6 PIT = 44 PHX = 35	Plan 9 PIT = 43 PHX = 35	
b = 0.35	C*	Plan 11 PIT = 41 PHX = 34			

Total Housing Gap: 512 households in Pittsburgh, 421 households in Phoenix.

Symbols: b = Rate at which the allowance decreases as the income increases.

C* = Basic payment level (varied by family size and also by site).

PERCENT OF RENT (P = aR) :

a = 0.6	a = 0.5	a = 0.4	a = 0.3	a = 0.2
Plan 13 PIT = 28 PHX = 21	Plans 14 - 16 PIT = 109 PHX = 81	Plans 17 - 19 PIT = 113 PHX = 66	Plans 20 - 22 PIT = 92 PHX = 84	Plan 23 PIT = 65 PHX = 46

Total Percent of Rent: 407 households in Pittsburgh, 298 households in Phoenix.

CONTROLS:

With Housing Information	Without Housing Information
Plan 24 PIT = 159 PHX = 137	Plan 25 PIT = 162 PHX = 145

Total Controls: 321 households in Pittsburgh, 282 households in Phoenix.

NOTE: This sample includes households that were active, although not necessarily receiving payments, after two years of enrollment; households whose enrollment income was above the eligibility limits or that moved into subsidized housing or their own homes are excluded. While data on the excluded households may be useful for special analyses, particular analyses may also require the use of a still more restricted sample than the one shown here.

Table 9

TWO-YEAR RETENTION RATES
(Kennedy, 1980, Table I-9)

	HOUSING GAP	UNCON- STRAINED	PERCENT OF RENT	CONTROL	ALL
PITTSBURGH					
Number of enrolled households	626	75	510	434	1,645
Percent still actively enrolled at the end of two years	72%	84%	80%	69%	74%
"Voluntary" retention rate[a]	84%	92%	94%	87%	88%
PHOENIX					
Number of enrolled households	695	70	490	525	1,780
Percent still actively enrolled at the end of two years	55%	57%	61%	54%	56%
"Voluntary" retention rate[a]	76%	83%	78%	74%	77%

SOURCE: Kennedy and MacMillan (1979), Appendix VI, Table VI-1.

a. Excludes enrolled households (from both numerator and denominator) that moved to their own home, to subsidized housing, or outside the county or became ineligible due to changes in household composition, institutionalization, or death.

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4   DATA COLLECTION IN THE DEMAND EXPERIMENT

The major data sources used in the analysis of the Demand Experiment were
the Baseline, Periodic and Exit Interviews, Housing Evaluations, Initial and
Monthly Household Reports, plus supplements, and payments data, plus data
from the 1970 Census. Each of these is briefly described below.

Baseline Interview

Baseline Interviews[1] were administered to all households before offers to
enroll in the program and were completed between March 1973 and January 1974.
Data were collected in the following general categories: housing expenditures
and consumption; location and housing search; neighborhood and housing pre-
ferences and satisfaction; maintenance and upgrading; household composition;
household assets, income, and expenses; and participation in other government
programs. The interviews provide measures of the household's position prior
to the experiment.

Periodic Interviews

Periodic Interviews were administered to all enrolled households approximately
six months, one year, and two years after enrollment. Subject areas included
housing expenditures and consumption; location and housing search; preferences
and satisfaction; maintenance and upgrading; and participation in other gov-
ernment programs.

Exit Interview for Nonparticipants

These interviews were administered to a sample of households that rejected
the offer to enroll in the program and were completed between February and
April 1974. Data were collected in the following general areas: reasons for
not enrolling; attitudes toward program requirements; attitudes toward the
subsidy; and effects of experimental requirements on enrollment.

Exit Interview for Program Terminees

These Exit Interviews were administered to all Experimental households that
terminated from the experiment after having some program experience and that

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[1]This interview, as well as the Exit Interview for Nonparticipants,
and the Periodic Interviews, were administered in the field by the National
Opinion Research Center.

still remained in the experimental jurisdictions. The interviews were conducted between August 1974 and March 1976. Data were collected in the following areas: attitudes toward the program requirements, attitudes toward site personnel, and moving and upgrading experiences, and reasons for termination.

Housing Evaluation Forms

Housing Evaluation Forms were used to collect detailed information on the characteristics of the units occupied by households in the Demand Experiment. The first Housing Evaluation Form was completed at enrollment, subsequent forms were completed at the time of each periodic interview.[1] Data from the Housing Evaluation forms have been used to determine whether Control households ever met the Minimum Standards requirement in the analysis of the normal probability of meeting requirements.

Initial and Monthly Household Report Forms

When interviewers were sent to households to explain the Experimental Housing Allowance Program and to make the enrollment offer, they also helped the household complete the Initial Household Report Forms. All households that accepted the enrollment offer were required to fill in these forms prior to enrollment. Initial Household Report forms were completed between April 1973 and February 1974. Detailed information was collected on each household's composition, housing expenditures (rent, utilities, furnishings, and so forth), and asset holdings (savings bonds, stocks, and so forth), as of the time of the interview. Income data were collected for each of the previous 12 months for each type of income (e.g., wages, social security, welfare) for each household member 18 years of age or over. Household expenses (e.g., alimony, child care, medical) were also collected for the 12 most current months. Data from the Initial Household Report Forms were used operationally to determine whether initial household composition and income eligibility requirements had been met. Analytically, these data have been used to describe the household's demographic characteristics and income just prior to participation in the program. After enrollment, households were required to submit a Household Report Form each month.

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[1]Housing evaluations were also conducted for Minimum Standards households whenever the household requested an evaluation to see if it met requirements and for all households whenever the household moved to a new unit.

The Household Events List

The Household Events List was the data source used to track households through the stages of enrollment. Operationally, these data were used to monitor the enrollment effort. The following steps in the enrollment process are recorded in the Household Events List: when the site office received the name and address of the household; when the contact letter was sent out; when the enrollment interview was completed; when a subsidy estimate was given; when the enrollment agreement was signed; when the Initial Household Report Form was completed; when verification was completed; and when the official enrollment letter was sent to the household. Reasons for not successfully completing enrollment were also recorded. Analytically, these data have been used in the derivation of the enrollment outcome variable.

Payments Data

After each monthly payment cycle, the household's current payment status, reasons for the status (if other than Full Payments status), payment period number, payment amount, and the intermediate variables used to calculate the payment were extracted from the payments system. These data were the source of participation response measures for analyses of participation decisions after enrollment.

In addition to the data collected by the experiment, the major outside data sources used were the Fourth Count Tapes of the 1970 Census of Population and Housing.

5 DESIGN OF THE PROGRAM COMPARISON STUDY

The Demand Experiment also collected data on other housing programs in the Pittsburgh and Phoenix sites for comparison with housing allowances. The three programs that are compared with Housing Allowances are:

> Public Housing (Conventional and Turnkey), comprising low-income housing projects owned and operated by a Public Housing Agency;

> Section 23 Leased Existing Housing, comprising housing units from the existing private housing stock leased by a Public Housing Agency;

> Section 236 Interest Subsidized Housing with and without Rent Supplements, owned and operated by organizations in the private sector and comprising housing projects that contain some

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units for very low-income households as well as units for moderate-income households.

These programs were selected primarily because they represent the major alternative rental housing assistance strategies that were being pursued by the federal government at the time data were collected for this analysis. Table 10, for example, gives the total number of units being provided under each major rental housing assistance program during Fiscal Year 1974. As the table indicates, Section 236, Owned Public Housing, and Leased Public Housing comprise a substantial majority of all units provided at about the time data were collected for this analysis (1975).

Details of Programs Selected

In order to sharpen the comparisons among major program types, the program definitions used in selecting the sample for the analysis were restricted to certain major program categories. In the case of Public Housing, for example, the analytical sample was restricted to units representing the most recent and "typical" Public Housing subprograms--Conventional and Turnkey I programs. These account for the bulk of newly constructed Public Housing units provided during the late 1960s and early 1970s.[1] Units included in the study population from which the sample was drawn comprised about 45 percent of all Public Housing units at the two sites.

Section 23 units were limited to those under which otherwise unsubsidized housing units from the existing privately-owned housing stock were leased by PHAs. The major exclusions from the sample were units provided under the "construction for leasing" subprogram and those for which Section 23 subsidies were given for units already subsidized by other programs such as Section 221(d)(3) and Section 236. It was felt that "construction for leasing" units were likely to be sufficiently similar to newly built Conventional or

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[1]All of the excluded Public Housing units were those built or acquired well before the 1960s under categories AP (Acquisition--privately owned), S (Conventional self-help new construction), U4 (Housing units developed under Public Law 412--U.S. Housing Act of 1937), U6 (National Defense Housing developed under Public Law 671 and conveyed for low rent housing use), W (War or Defense Housing developed under the Lanham Act--Public Law 849 and conveyed for low rent housing use). For data on the prevalence of units in such categories during the time covered by this analysis see the HUD Consolidated Development Directory, Report S-11A, June 30, 1974.

Table 10

UNIT BREAKDOWN BY LEGISLATIVE TITLE OF
FEDERALLY SUBSIDIZED RENTAL HOUSING,
THROUGH FY 1974
(Kennedy, 1980, Table I-10)

PROGRAM	NUMBER OF UNITS[a]	PERCENT
Section 236	569,910	26%
Rent Supplement	203,230	9
Single Subsidy[b]--107,350		
Double Subsidy[b]-- 95,880		
Public Housing/Owned	1,149,000	52
Public Housing/Leased (Section 23)	173,700	8
Section 221(d)(3)BMIR	95,200	4
Section 202	19,700	1
TOTAL	2,210,740	100%

SOURCE: Schechter (1973), Table 4, p. 40.

a. The number of housing units supported through Fiscal Year 1974.

b. The single subsidy units are those subsidized only by the Rent Supplement program. Double subsidy units are those subsidized both by the Rent Supplement program and by one of several other federal subsidy programs, primarily the Section 236, Section 202, and Section 221(d)(3)BMIR programs.

Turnkey units that little would be added to the analysis by their inclusion.[1] Section 23 units in various interest-subsidized, privately-owned projects (which were either newly constructed or substantially rehabilitated) were mostly in one of the two sites (Allegheny County) and even these were relatively few in number.

The Section 23 units that were sampled included several different kinds of existing housing units. About 25 percent of units in the Pittsburgh sample were "leased rehabilitated" units (as distinct from "leased existing" units). Because there were no special subsidies provided for effecting the rehabilitation of leased rehabilitated units, no attempt was made in the analysis to distinguish the rehabilitated units from the other units leased from the existing stock.

Another subprogram distinction that remains among sampled units is between units leased under the "original" Section 23 program and the "revised" program, whose provisions were stipulated in HUD regulations issued in late 1973. Under these regulations, there were changes in the legal relationships among the PHA, the tenant, and the landlord, in the typical arrangements for property management responsibility, and in the degree to which potential participants were permitted to locate their own housing. In many ways the revised Section 23 program resembles its successor program, Section 8. The revised program existed only in Maricopa County at the time of this analysis, where about 60 percent of sampled units were in the revised Section 23 program.

Section 236 units were limited to those in projects which contained at least some Rent Supplement units. Units included in the study population comprised 66 percent of all Section 236 units in Pittsburgh and 75 percent of all Section 236 units in Phoenix. A major reason for the limitation to projects with Rent Supplement units was to increase the comparability between the Section 236 program as defined for analytical purposes and the other programs being compared. In particular, Section 236 is intended, on average, to serve a somewhat higher income population than are the other

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[1]As a practical matter, the new construction component could not have been treated as a separate program type in this study because there were only two projects, at one of the sites, of this type. Furthermore, one of these two projects, 100 mobile homes for the elderly, was not at all typical of the program nationally.

Comparison Programs. By emphasizing Section 236 projects that included some "deep subsidy" Rent Supplement units, and thus a greater share of low-income households, a greater number of observations were obtained which spanned the range of incomes covered by the other programs. Several Section 236 sub-programs are included in the resulting sample--Nonprofit and Limited Dividend (for profit) sponsored projects, and new construction and rehabilitation. In Pittsburgh, all four subprogram types (differentiated by sponsor type and construction type) are observed. In Phoenix, where there were no rehabilitated units, only variation by sponsor type is observed.

Sample Sizes and Data Collection

Data for the Comparison Programs were collected at a time corresponding to the end of the second complete year of operation of the Demand Experiment (the time of the Third Periodic Interview). Much of the data were collected using survey instruments based on those used to obtain data on household characteristics and attitudes and housing and neighborhood attributes of Demand Experiment participants. Major data sources were:

> Interviews with a sample of participants in the three major comparison programs using the Program Comparison Interview, largely made up of items taken from the Demand Experiment Baseline and Periodic Interviews;

> Evaluations of a sample of housing units in the Comparison Programs, using the Demand Experiment Housing Evaluation Form (HEF);

> HUD records and statistical reports, particularly those relating to cost and occupancy of Comparison Programs; and

> Existing studies of housing and other subsidy programs.

Data were collected based on a random sample of units in all Comparison Programs, except Public Housing in Phoenix. For that program, a stratified random sample with two strata of roughly equal size, elderly and nonelderly, were drawn in order to obtain more observations on elderly households than would have occurred under an unstratified sample.

The sample sizes for each of the Comparison Programs are shown in Table 11. Two sample sizes are given, one for the comparison study in general and one for the analysis of program costs. The sample for the cost analysis is smaller because housing evaluations (which were necessary to create cost variables) were not completed for the entire comparison study sample.

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Table 11

SAMPLE SIZES FOR COMPARISON PROGRAMS
FOR THE COMPARISONS STUDY IN GENERAL AND
FOR THE ANALYSIS OF PROGRAM COSTS[a]
(Kennedy, 1980, Table I-11)

	COMPARISONS STUDY		COST ANALYSIS[b]	
	PITTSBURGH	PHOENIX	PITTSBURGH	PHOENIX
PUBLIC HOUSING	286	234[c]	241	225
Conventional	227	197	194	189
Turnkey	59	37	47	36
SECTION 23	106	159	94	145
Original	106	67	94	60
Revised	-	92	-	85
SECTION 236	330	98	281	87
New Construction	151	98	123	87
Rehabilitation	179	-	158	-
TOTAL	722	491	616	457

SOURCE: Mayo et al. (1979), Part 1, Table II-4.

    a. In particular analyses, sample sizes may differ because of the exclusion of observations for which key data were missing.

    b. The cost analysis sample is smaller than the comparisons study sample because data for the former are limited by the number of households for whom Housing Evaluation Forms were completed—less than the entire sample.

    c. For many analyses presented in the text, the sample size presented is a weighted average of samples for elderly and nonelderly strata with weights equal to 0.223 for the elderly strata and 1.0 for the nonelderly strata.

Fewer units were sampled in Phoenix than in Pittsburgh in order to keep the total sample size for both sites within a stipulated limit, while permitting the best chance of making statistical contrasts among important sample sub-populations. For example, it was decided that the ability to distinguish between outcomes for minority and nonminority households in Section 236 could most effectively be achieved in Pittsburgh through increased sample size rather than in Phoenix (where program participants were largely nonminority).

Demographic characteristics of sampled households are shown in Table 12. Differences among programs are largely accounted for by differences in program eligibility and location, as discussed in Mayo et al. (1979), Part 1, Chapter 2.

Table 12

DEMOGRAPHIC CHARACTERISTICS OF HOUSEHOLDS IN COMPARISON PROGRAMS SAMPLE
(Kennedy, 1980, Table I-12)

	PITTSBURGH				PHOENIX			
	PUBLIC HOUSING	SECTION 23	SECTION 236	COMBINED[a]	PUBLIC HOUSING	SECTION 23	SECTION 236	COMBINED[a]
POVERTY								
Percent below poverty	56%	52%	27%	47%	81%	75%	38%	56%
Percent above poverty	44	48	73	53	19	25	62	44
RACE								
Minority	61	93	63	62	80	38	19	42
Nonminority	39	7	37	38	20	62	81	58
AGE								
Elderly (greater than 62 years)	48	6	34	43	21	45	37	32
Nonelderly	52	94	66	57	79	55	63	68
HOUSEHOLD SIZE								
1	42	3	38	40	15	50	39	31
2	20	8	24	21	16	19	24	21
3-4	22	17	30	24	31	19	27	28
5+	16	72	8	14	38	12	10	20
Mean	2.5	6.2	2.3	2.5	3.9	2.2	2.3	2.9
WELFARE								
Percent of nonelderly households receiving any welfare income	82	85	42	67	58	57	17	36
SAMPLE SIZES	(286)	(106)	(330)	(722)	(142[b])	(159)	(98)	(399)

SAMPLE: <u>Comparison Program households</u>—a sample of households participating in the Public Housing, Section 23, and Section 236 programs in Allegheny and Maricopa counties.

DATA SOURCE: Mayo et al. (1979), Part 1, Tables 2-2 and 2-10.

a. Weighted average of samples based on the proportional representation of each program in each site (rather than in the sample). Weights are 0.687, 0.013, and 0.300 in Pittsburgh and 0.349, 0.071, and 0.580 in Phoenix for Public Housing, Section 23 and Section 236, respectively.

b. Weighted average of sample sizes in the elderly and nonelderly strata in Phoenix Public Housing; see Appendix II for a description of the calculation of statistics based on this sample.

6   SELECTED STATISTICS

This section presents tabulations of key statistics and samples, culled from the various Demand Experiment reports listed in Section 7. Sample sizes vary primarily due to differences in the sample definitions given at the bottom of each table (all enrolled, all still actively enrolled after two years, movers, and so forth). In addition, however, samples may vary further because of elimination of missing or suspect values for specific variables. Attempts to duplicate tables should be informed by the sample descriptions appended to the reports from which the tables were taken as well as the documentation of the Demand Experiment data base.

6.1   Participation

The overall sampling procedure used in the Demand Experiment was described in Section 3. Figures 1 through 3 present the enrollment sequence in more detail. Following this are tabulations of acceptance and subsequent participation. Acceptance rates are defined as the proportion of households completing the enrollment interview that accepted enrollment in the experiment. As indicated in Figure 2, this definition does exclude consideration of some households that were contacted but broke off the interview before receiving a complete description of the program. Subsequent participation rates are defined as the proportion of enrolled households that actually participated in the program and received at least one allowance payment. (This excludes households that accepted the enrollment offer but did not enroll; as indicated in Figure 3, almost all of these households did not enroll because they were ineligible.)

Figure 1
PARTICIPATION RATES IN THE DEMAND EXPERIMENT
(Kennedy and MacMillan, 1979, Figure IV-2)

Pittsburgh

All households screened eligible in a random interview sample **4127**	80% →	Contacted for enrollment interview **3711**	78% →	Completed enrollment interview **2880**	73% →	Accepted enrollment offer **2101**	76% →	Found eligible **1694**	89% →	Enrolled[a] **1580**	692 →	Households in allowance plans with a housing requirement — 56%

Could not be contacted **416**

Did not complete interview **821**

Did not accept offer **789**

Found ineligible **507**

Did not enroll **14**

Households in allowance plans with a housing requirement

56% — Received a full payment **331**

Never received a full payment **261**

988 — Households in allowance plans with a housing requirement

100% — Received a full payment **988**

Never received a full payment **0**

Phoenix

All households screened eligible in a random interview sample **3834**	81% →	Contacted for enrollment interview **3098**	81% →	Completed enrollment interview **2524**	83% →	Accepted enrollment offer **2089**	85% →	Found eligible **1767**	98% →	Enrolled[a] **1729**	662 →	Households in allowance plans with a housing requirement — 59%

Could not be contacted **736**

Did not complete interview **574**

Did not accept offer **435**

Found ineligible **322**

Did not enroll **38**

Households in allowance plans with a housing requirement

59% — Received a full payment **391**

Never received a full payment **271**

1067 — Households in allowance plans with a housing requirement

100% — Received a full payment **1067**

Never received a full payment **0**

[a]Excludes households that were found to be ineligible after enrollment (households living in their own homes or in subsidized housing and households with enrollment incomes over the eligibility limits)

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Figure 2
DETAILS OF COMPLETION OF THE
ENROLLMENT INTERVIEW
(Kennedy and MacMillan, 1979, Figure IV-3)

Pittsburgh

```
┌─────────────┐          ┌─────────────┐          ┌─────────────┐
│  Contacted  │          │   Did not   │          │  Completed  │
│for enrollment│   85%   │  break off  │   91%    │  interview  │
│  interview  │────────▶│  interview  │────────▶│             │
│             │          │             │          │             │
│    3711     │          │    3166     │          │    2890     │
└─────────────┘          └─────────────┘          └─────────────┘
         │ 15%                   │ 9%
         ▼                       ▼
   ┌─────────────┐         ┌─────────────┐
   │  Broke off  │         │Cut interview│
   │  interview  │         │    short    │
   │             │         │             │
   │     545     │         │     276     │
   └─────────────┘         └─────────────┘
```

Phoenix

```
┌─────────────┐          ┌─────────────┐          ┌─────────────┐
│  Contacted  │          │   Did not   │          │  Completed  │
│for enrollment│   86%   │  break off  │   94%    │  interview  │
│  interview  │────────▶│  interview  │────────▶│             │
│             │          │             │          │             │
│    3098     │          │    2673     │          │    2524     │
└─────────────┘          └─────────────┘          └─────────────┘
         │ 14%                   │ 6%
         ▼                       ▼
   ┌─────────────┐         ┌─────────────┐
   │  Broke off  │         │Cut interview│
   │  interview  │         │    short    │
   │             │         │             │
   │     425     │         │     149     │
   └─────────────┘         └─────────────┘
```
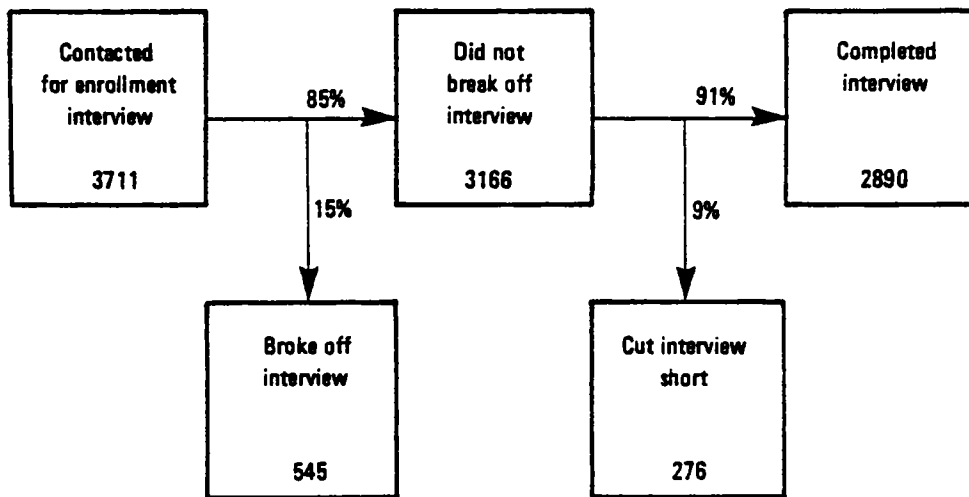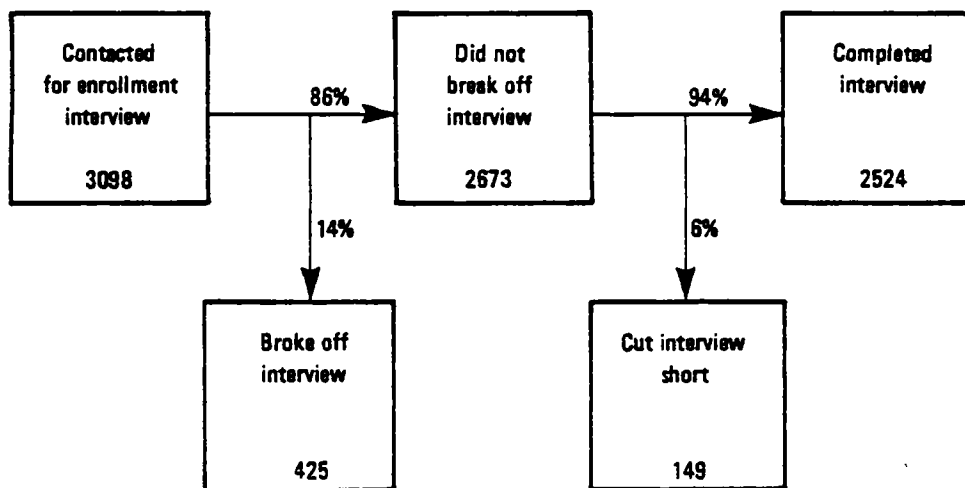
Figure 3
DETAILS OF THE ENROLLMENT PROCESS FOR
HOUSEHOLDS THAT ACCEPTED THE ENROLLMENT
OFFER[a]
(Kennedy and MacMillan, 1979, Figure IV-4)

Pittsburgh

```
┌──────────────┐         ┌──────────────┐         ┌──────────────┐
│ Accepted the │   76%   │   Found to   │   99%   │   Enrolled   │
│  enrollment  │────────▶│  be eligible │────────▶│ and eligible │
│    offer     │         │              │         │              │
│     2101     │   24%   │     1594     │   1%    │     1580     │
└──────────────┘    │    └──────────────┘    │    └──────────────┘
                    ▼                         ▼
            ┌──────────────┐         ┌──────────────┐
            │    Found     │         │ Did not enroll│
            │    to be     │         │   although   │
            │  ineligible  │         │   eligible   │
            │              │         │              │
            │     507      │         │      14      │
            └──────────────┘         └──────────────┘
```

Phoenix

```
┌──────────────┐         ┌──────────────┐         ┌──────────────┐
│ Accepted the │   85%   │   Found to   │   98%   │   Enrolled   │
│  enrollment  │────────▶│  be eligible │────────▶│ and eligible │
│    offer     │         │              │         │              │
│     2089     │   15%   │     1767     │   2%    │     1729     │
└──────────────┘    │    └──────────────┘    │    └──────────────┘
                    ▼                         ▼
            ┌──────────────┐         ┌──────────────┐
            │    Found     │         │ Did not enroll│
            │    to be     │         │   although   │
            │  ineligible  │         │   eligible   │
            │              │         │              │
            │     322      │         │      38      │
            └──────────────┘         └──────────────┘
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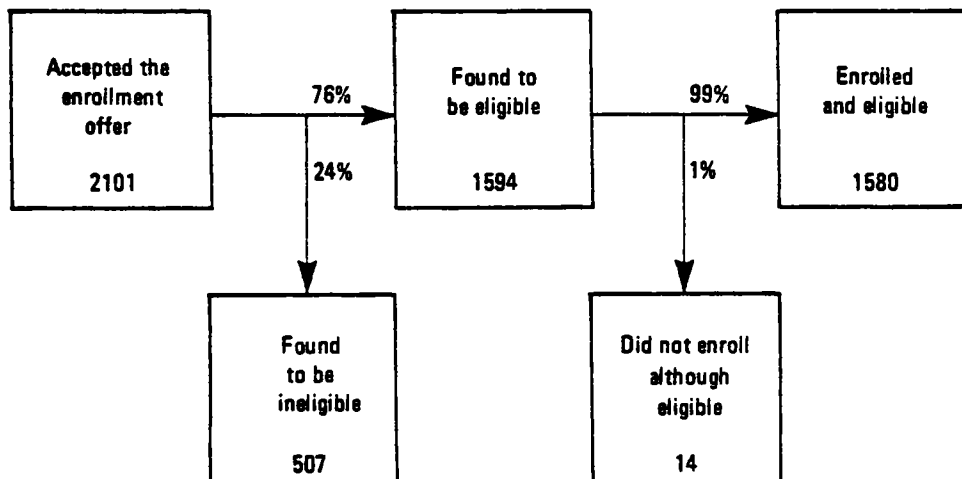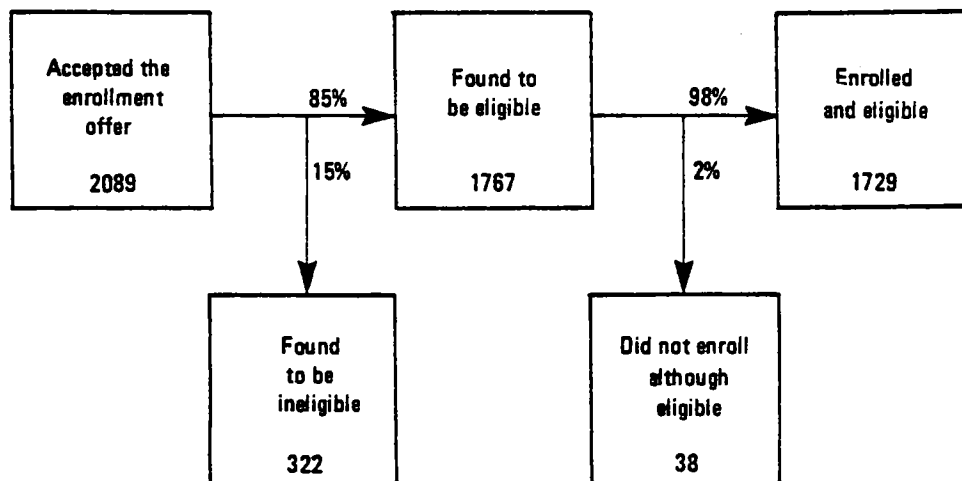
[a]As indicated in the text, eligibility review of some households was completed after enrollment.
In addition, income limits for Control households were higher than those for the Experimental plans.
The analysis of this report does not include such Control households, and they are not included in
the figure for "Enrolled and Eligible" households above.
  Figures for households actually enrolled regardless of subsequent eligibility determination are
shown below:

	ACCEPTED	ELIGIBLE	ENROLLED
Pittsburgh	2101 —84%→	1774 —99%→	1760
Phoenix	2089 —90%→	1879 —98%→	1841

35

Table 13

STAGES IN PARTICIPATION
(Kennedy and MacMillan, 1979, Table 2-3)

	PITTSBURGH				PHOENIX			
	HOUSING GAP HOUSE- HOLDS	PERCENT OF RENT HOUSE- HOLDS	UNCON- STRAINED HOUSE- HOLDS	CON- TROL HOUSE- HOLDS	HOUSING GAP HOUSE- HOLDS	PERCENT OF RENT HOUSE- HOLDS	UNCON- STRAINED HOUSE- HOLDS	CON- TROL HOUSE- HOLDS
Overall participation rate	41%	82%	78%	61%	49%	87%	90%	78%
Acceptance rate	74	82	78	61	83	87	90	78
(Number of cases)	(1086)	(821)	(120)	(863)	(1007)	(678)	(89)	(750)
Subsequent participation rate	56	100	100	100	59	100	100	100
(Number of cases)	(592)	(484)	(73)	(431)	(662)	(476)	(70)	(521)

SAMPLE: All households that completed the enrollment interview and received a subsidy estimate.
DATA SOURCES: Household Events List, payments file.

Table 14

PARTICIPATION RATES OF HOUSING GAP HOUSEHOLDS
BY TYPE OF HOUSING REQUIREMENT
(Kennedy and MacMillan, 1979, Table 2-4)

	PITTSBURGH			PHOENIX		
	MINIMUM STAND- ARDS REQUIRE- MENT	MINIMUM RENT LOW REQUIRE- MENT	MINIMUM RENT HIGH REQUIRE- MENT	MINIMUM STAND- ARDS REQUIRE- MENT	MINIMUM RENT LOW REQUIRE- MENT	MINIMUM RENT HIGH REQUIRE- MENT
Overall participation rate	30%	60%	42%	45%	61%	44%
Acceptance rate (Number of cases)	75 (489)	74 (287)	73 (310)	84 (470)	82 (258)	81 (279)
Subsequent participation rate (Number of cases)	40 (268)	81 (156)	58 (168)	54 (307)	74 (167)	54 (188)

SAMPLE: All Housing Gap households that completed the enrollment interview and received a subsidy estimate.

DATA SOURCES: Household Events List, payments file.

Table 15

(Kennedy and MacMillan, 1979, Table 2-7)

DEMOGRAPHIC CHARACTERISTIC	PITTSBURGH			PHOENIX		
	NUMBER THAT COMPLETED ENROLLMENT INTERVIEW	NUMBER THAT ACCEPTED ENROLLMENT OFFER	ACCEPT-ANCE RATE	NUMBER THAT COMPLETED ENROLLMENT INTERVIEW	NUMBER THAT ACCEPTED ENROLLMENT OFFER	ACCEPT-ANCE RATE
AGE OF HOUSEHOLD HEAD						
Under 30	825	671	81%	1,040	893	86%
30-61	1,205	902	75	965	788	82
62 and over	860	528	61	519	408	79
HOUSEHOLD SIZE						
1 person	506	319	63	340	272	80
2 persons	765	559	73	730	593	81
3-4 persons	1,066	791	74	930	796	86
5-6 persons	393	312	79	351	279	79
7 or more persons	160	120	75	173	149	86
MOBILITY IN THE PREVIOUS THREE YEARS						
No moves	1,462	976	67	562	425	76
1 move	810	607	75	667	551	83
2 moves	352	284	81	486	401	82
3 or more moves	263	231	88	801	705	88
RACE OR ETHNICITY OF HOUSEHOLD HEAD						
Nonminority	2,309	1,640	71	1,764	1,495	85
Black	581	461	79	188	147	78
Spanish American	-	-	-	572	447	78
SEX OF HOUSEHOLD HEAD						
Male	1,504	1,094	70	1,680	1,380	82
Female	1,326	1,007	76	984	709	84
INCOME						
$1-1,999	372	244	66	305	246	81
$2,000-3,999	842	650	77	586	497	85
$4,000-5,999	781	585	75	648	556	86
$6,000-7,999	525	384	73	523	428	82
$8,000-9,999	228	150	66	272	222	82
$10,000 or more	142	88	62	190	140	74
WELFARE RECIPIENT STATUS						
Welfare recipient	1,160	932	80	523	443	85
Nonrecipient	1,730	1,169	68	2,001	1,646	82
FOOD STAMP RECIPIENT STATUS						
Food Stamp recipient	1,162	936	81	589	512	87
Nonrecipient	1,728	1,165	67	1,935	1,577	81
SATISFACTION WITH UNIT						
Satisfied	2,051	1,453	71	1,843	1,519	82
Dissatisfied	839	648	77	678	568	84
SATISFACTION WITH NEIGHBORHOOD						
Satisfied	2,251	1,613	72	2,049	1,688	82
Dissatisfied	635	484	76	474	400	84

SAMPLE: All Housing Gap households that completed the enrollment interview and received a subsidy estimate.

DATA SOURCES: Baseline Interview, Household Events List.

Table 16
INITIAL PAYMENT STATUS AND SUBSEQUENT PARTICIPATION
(Kennedy and MacMillan, 1979, Table 2-9)

	PITTSBURGH				PHOENIX			
	ALL HOUSING GAP HOUSEHOLDS	MINIMUM STANDARDS REQUIREMENT	MINIMUM RENT LOW REQUIREMENT	MINIMUM HIGH RENT REQUIREMENT	ALL HOUSING GAP HOUSEHOLDS	MINIMUM STANDARDS REQUIREMENT	MINIMUM RENT LOW REQUIREMENT	MINIMUM RENT HIGH REQUIREMENT
Percentage of enrolled households that received a full payment at enrollment	33%	15%	64%	35%	29%	19%	53%	27%
(Number of cases)	(592)	(268)	(156)	(168)	(662)	(307)	(167)	(188)
Subsequent participation rate for households that received a full payment at enrollment	100	100	100	100	100	100	100	100
(Number of cases)	(197)	(39)	(100)	(58)	(195)	(57)	(88)	(50)
Subsequent participation rate for households that did not receive a full payment at enrollment	34	30	48	35	42	44	46	37
(Number of cases)	(395)	(229)	(56)	(110)	(467)	(250)	(79)	(138)
Subsequent participation rate for all enrolled households	56	40	81	58	59	54	74	54
(Number of cases)	(592)	(268)	(156)	(168)	(662)	(307)	(167)	(188)
Percentage of all participants that received a full payment at enrollment	60	36	79	60	50	34	71	50
(Number of cases)	(331)	(107)	(127)	(97)	(391)	(166)	(124)	(101)

SAMPLE: Enrolled Housing Gap households, excluding households with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.

DATA SOURCE: Payments file.

Table 17

SUBSEQUENT PARTICIPATION RATES FOR ENROLLED
HOUSING GAP HOUSEHOLDS BY HOUSEHOLD CHARACTERISTICS
(Kennedy and MacMillan, 1979, Table 2-14)

DEMOGRAPHIC CHARACTERISTIC	PITTSBURGH			PHOENIX		
	NUMBER ENROLLED AND ELIGIBLE	NUMBER THAT EVER RECEIVED A FULL PAYMENT	SUBSE-QUENT PARTICI-PATION RATE	NUMBER ENROLLED AND ELIGIBLE	NUMBER THAT EVER RECEIVED A FULL PAYMENT	SUBSE-QUENT PARTICI-PATION RATE
AGE OF HOUSEHOLD HEAD						
Under 30	178	106	60%	259	177	68%
30-61	260	150	58	264	139	53
62 and over	153	75	49	139	75	54
HOUSEHOLD SIZE						
1 person	108	51	47	91	54	59
2 persons	153	100	65	178	119	67
3-4 persons	209	123	59	245	154	63
5-6 persons	86	44	51	89	45	51
7 or more persons	35	13	37	59	19	32
MOBILITY IN THE PREVIOUS THREE YEARS						
No moves	271	133	49	144	60	42
1 move	167	97	58	171	107	63
2 moves	86	58	67	119	66	55
3 or more moves	66	41	62	225	156	69
RACE OR ETHNICITY OF HOUSEHOLD HEAD						
Nonminority	448	266	59	439	289	66
Black	144	65	45	41	16	39
Spanish American	-	-	-	182	86	47
SEX OF HOUSEHOLD HEAD						
Male	230	119	52	416	234	56
Female	361	212	59	246	157	64
INCOME						
$1-1,999	73	33	45	75	30	40
$2,000-3,999	264	145	55	174	97	56
$4,000-5,999	190	119	63	239	156	65
$6,000-7,999	63	34	54	136	88	65
$8,000-9,999	-	-	-	27	15	56
$10,000 or more	-	-	-	11	5	43
WELFARE RECIPIENT STATUS						
Welfare recipient	349	191	55	170	77	45
Nonrecipient	243	140	58	492	314	64
FOOD STAMP RECIPIENT STATUS						
Food Stamp recipient	347	183	53	178	97	54
Nonrecipient	245	148	60	484	294	61
SATISFACTION WITH UNIT						
Satisfied	419	247	59	461	271	59
Dissatisfied	173	84	49	201	120	60
SATISFACTION WITH NEIGHBORHOOD						
Satisfied	453	255	56	520	305	59
Dissatisfied	137	75	55	142	86	61

SAMPLE: Enrolled Housing Gap households, excluding households with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.
DATA SOURCES: Baseline Interview, Initial Household Report Form, payments file.

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Table 18

PARTICIPATION RATES AT THE END OF TWO YEARS[a]
(Kennedy and MacMillan, 1979, Table 5-1)

	MINIMUM STANDARDS HOUSEHOLDS		MINIMUM RENT LOW REQUIREMENT		MINIMUM RENT HIGH REQUIREMENT	
	Housing Gap households	Control households	Housing Gap households	Control households	Housing Gap households	Control households
PITTSBURGH						
Participation rate among enrolled households at the end of two years	44%	23%	83%	71%	52%	41%
(Number of cases)	(174)	(217)	(111)	(230)	(93)	(230)
Percentage of households that met requirements at enrollment	20	16	59	56	27	27
(Number of cases)	(174)	(217)	(110)	(230)	(93)	(230)
Participation rate among households that met requirements at enrollment	91	83	100	97	100	94
(Number of cases)	(34)	(35)	(65)	(128)	(25)	(62)
Participation rate among households that did not meet requirements at enrollment	32	12	58	38	34	21
(Number of cases)	(140)	(182)	(45)	(102)	(68)	(168)
Percentage of households participating at the end of two years that met requirements at enrollment	41	58	71	76	52	62
(Number of cases)	(71)	(50)	(91)	(163)	(48)	(94)
PHOENIX						
Participation rate among enrolled households at the end of two years	56	33	76	46	51	27
(Number of cases)	(154)	(237)	(87)	(239)	(101)	(238)
Percentage of households that met requirements at enrollment	19	16	45	39	19	18
(Number of cases)	(153)	(233)	(87)	(239)	(101)	(238)
Participation rate among households that met requirements at enrollment	86	82	97	90	95	88
(Number of cases)	(29)	(38)	(39)	(94)	(19)	(43)
Participation rate among households that did not meet requirements at enrollment	48	24	58	17	40	13
(Number of cases)	(124)	(195)	(48)	(145)	(82)	(195)
Percentage of households participating at the end of two years that met requirements at enrollment	29	40	58	77	35	60
(Number of cases)	(85)	(78)	(66)	(110)	(51)	(63)

SAMPLE: Housing Gap and Control households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits for their treatment group and those with incomes at two years over the eligibility limits for the modal (dC° = 1.0C°, b = .25) Housing Gap treatment group and households living in their own homes or in subsidized housing.

DATA SOURCES: Initial and monthly Household Report Forms, Housing Evaluation Forms, payments file.

[a]Note that for Control households the "participation" rate refers to the rate at which Control households met each of the three requirements and has no relationship to their status in the experiment.

6.2   Mobility and Meeting Requirements at Two Years

This section presents information on the proportion of enrolled households that remained in the experiment for two years, the proportion of those that moved, and for the Housing Gap, Control, and Unconstrained samples, the proportions that met various housing requirements at enrollment and at two years. The major purpose is to indicate the size of various subsamples typically selected for analysis.

Table 19

ENROLLED HOUSEHOLDS BY STATUS AT TWO YEARS
AND MOBILITY--PERCENT OF RENT AND CONTROLS
(Friedman and Weinberg, 1978, Table II-1)

SAMPLE	TREATMENT TYPE		TOTAL
	PERCENT OF RENT	CONTROL	
PITTSBURGH			
Enrolled households	510	434	1,019
Households active at two years[a]	407	321	791
Households that moved between enrollment and two years[a]	153	112	290
Households that did not move between enrollment and two years[a]	254	209	501
PHOENIX			
Enrolled households	490	525	1,085
Households active at two years[a]	298	282	620
Households that moved between enrollment and two years[a]	182	148	353
Households that did not move between enrollment and two years[a]	116	134	267

DATA SOURCES: Payments file and Periodic Interviews.

NOTE: Samples exclude households with enrollment incomes over the eligibility limits.

a. Excludes households living in their own homes or in subsidized housing.

Figure 4

THE DYNAMICS OF MEETING
MINIMUM STANDARDS REQUIREMENTS:
MINIMUM STANDARDS HOUSEHOLDS,
BETWEEN ENROLLMENT AND TWO YEARS
(Friedman and Weinberg, 1979, Figure IV-1)

P I T T S B U R G H
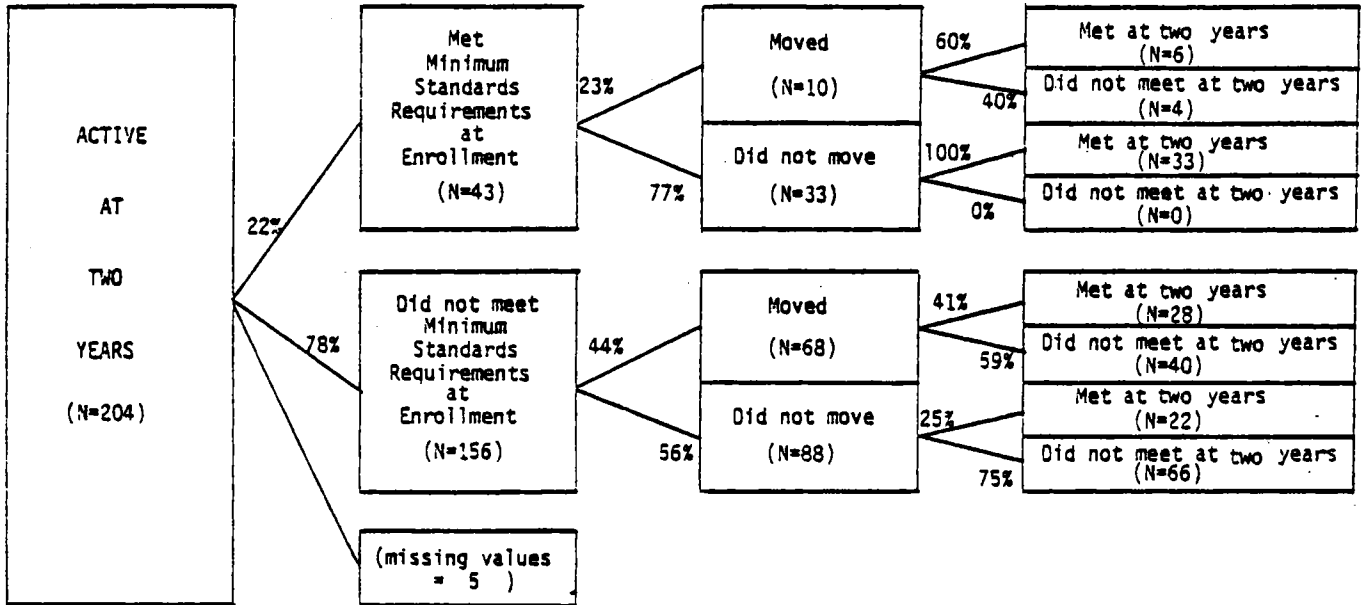
P H O E N I X

SAMPLE: Minimum Standards households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.
DATA SOURCES: Initial and monthly Household Report Forms, Baseline and Periodic Interviews, and payments file.
NOTE: The number of enrollees that dropped out at two years was 77 in Pittsburgh and 155 in Phoenix.

Figure 5

THE DYNAMICS OF MEETING
MINIMUM STANDARDS REQUIREMENTS:
CONTROL HOUSEHOLDS,
BETWEEN ENROLLMENT AND TWO YEARS
(Friedman and Weinberg, 1979, Figure IV-2)

P I T T S B U R G H

P H O E N I X

SAMPLE: Minimum Standards households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.
DATA SOURCES: Initial and monthly Household Report Forms, Baseline and Periodic Interviews, and payments file.
NOTE: The number of enrollees that dropped out at two years was 113 in Pittsburgh and 243 in Phoenix.

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Figure 6

THE DYNAMICS OF MEETING
MINIMUM STANDARDS REQUIREMENTS:
UNCONSTRAINED HOUSEHOLDS,
BETWEEN ENROLLMENT AND TWO YEARS
(Friedman and Weinberg, 1979, Figure IV-3)

P I T T S B U R G H

```
                                                        100%  ┌─────────────────────┐
                                                   ┌────────→ │ Met at two years    │
                      ┌──────────────┐        12%  │          │     (N=1)           │
                      │     Met      │ ┌──────────────┐        ├─────────────────────┤
                      │   Minimum    │ │   Moved   │            │ Did not meet at two years│
                      │  Standards   │ │   (N=1)   │     0%    │     (N=0)           │
                      │ Requirements │ └──────────────┘        └─────────────────────┘
                 13%  │     at       │                100%  ┌─────────────────────┐
         ┌──────────→ │  Enrollment  │              ┌────────→ │ Met at two years    │
┌────────────┐       │    (N=8)     │  88%  ┌──────────────┐   │     (N=7)           │
│            │       └──────────────┘ │ Did not move │        ├─────────────────────┤
│  ACTIVE    │                         │   (N=7)   │          │ Did not meet at two years│
│            │                         └──────────────┘   0%  │     (N=0)           │
│   AT       │                                              └─────────────────────┘
│            │                                          18%  ┌─────────────────────┐
│   TWO      │                         ┌──────────────┐ ┌──────→ │ Met at two years    │
│            │       ┌──────────────┐  42% │   Moved   │ │      │     (N=4)           │
│  YEARS     │       │ Did not meet │ ┌──────────────┐         ├─────────────────────┤
│            │  87%  │   Minimum    │ │  (N=22)   │           │ Did not meet at two years│
│  (N=63)    │ ┌───→ │  Standards   │ └──────────────┘   82%  │     (N=18)          │
│            │ │     │ Requirements │                        └─────────────────────┘
└────────────┘ │     │     at       │                    6%  ┌─────────────────────┐
               │     │  Enrollment  │  58% ┌──────────────┐ ┌──→ │ Met at two years    │
               │     │   (N=53)     │ │ Did not move │          │     (N=2)           │
               │     └──────────────┘ │   (N=31)  │            ├─────────────────────┤
               │                       └──────────────┘        │ Did not meet at two years│
               │     ┌──────────────┐                     94%  │     (N=29)          │
               └───→ │(missing values│                        └─────────────────────┘
                     │    = 2 )     │
                     └──────────────┘
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P H O E N I X

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                                                         67%  ┌─────────────────────┐
                                                   ┌────────→ │ Met at two years    │
                      ┌──────────────┐        33%  │          │     (N=2)           │
                      │     Met      │ ┌──────────────┐        ├─────────────────────┤
                      │   Minimum    │ │   Moved   │            │ Did not meet at two years│
                      │  Standards   │ │   (N=3)   │     33%   │     (N=1)           │
                      │ Requirements │ └──────────────┘        └─────────────────────┘
                 23%  │     at       │                100%  ┌─────────────────────┐
         ┌──────────→ │  Enrollment  │              ┌────────→ │ Met at two years    │
┌────────────┐       │    (N=9)     │  67%  ┌──────────────┐   │     (N=6)           │
│            │       └──────────────┘ │ Did not move │        ├─────────────────────┤
│  ACTIVE    │                         │   (N=6)   │          │ Did not meet at two years│
│            │                         └──────────────┘   0%  │     (N=0)           │
│   AT       │                                              └─────────────────────┘
│            │                                          37%  ┌─────────────────────┐
│   TWO      │                         ┌──────────────┐ ┌──────→ │ Met at two years    │
│            │       ┌──────────────┐  63% │   Moved   │ │      │     (N=7)           │
│  YEARS     │       │ Did not meet │ ┌──────────────┐         ├─────────────────────┤
│            │  77%  │   Minimum    │ │  (N=19)   │           │ Did not meet at two years│
│  (N=40)    │ ┌───→ │  Standards   │ └──────────────┘   63%  │     (N=12)          │
│            │ │     │ Requirements │                        └─────────────────────┘
└────────────┘ │     │     at       │                    27%  ┌─────────────────────┐
               │     │  Enrollment  │  37% ┌──────────────┐ ┌──→ │ Met at two years    │
               │     │   (N=30)     │ │ Did not move │          │     (N=3)           │
               │     └──────────────┘ │   (N=11)  │            ├─────────────────────┤
               │                       └──────────────┘        │ Did not meet at two years│
               │     ┌──────────────┐                     73%  │     (N=8)           │
               └───→ │(missing values│                        └─────────────────────┘
                     │    = 1 )     │
                     └──────────────┘
```

SAMPLE: Unconstrained households active at two years after enrollment, excluding those with
enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.
   DATA SOURCES: Initial and monthly Household Report Forms, Baseline and Periodic Interviews, and
payments file.
   NOTE: The number of enrollees that dropped out at two years was 12 in Pittsburgh and 30 in Phoenix.

Figure 7

THE DYNAMICS OF MEETING
MINIMUM RENT LOW REQUIREMENTS:
MINIMUM RENT LOW HOUSEHOLDS,
BETWEEN ENROLLMENT AND TWO YEARS

(Friedman and Weinberg, 1979, Figure IV-4)

P I T T S B U R G H

P H O E N I X

SAMPLE: Minimum Rent Low households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.

DATA SOURCES: Initial and monthly Household Report Forms, Baseline and Periodic Interviews, and payments file.

NOTE: The number of enrollees that dropped out at two years was 38 in Pittsburgh and 77 in Phoenix.

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Figure 8

THE DYNAMICS OF MEETING
MINIMUM RENT LOW REQUIREMENTS:
CONTROL HOUSEHOLDS,
BETWEEN ENROLLMENT AND TWO YEARS
(Friedman and Weinberg, 1979, Figure IV-5)

PITTSBURGH

PHOENIX

SAMPLE: Minimum Rent Low households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.

DATA SOURCES: Initial and monthly Household Report Forms, Baseline and Periodic Interviews, and payments file.

NOTE: The number of enrollees that dropped out at two years was 113 in Pittsburgh and 243 in Phoenix.

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Figure 9

THE DYNAMICS OF MEETING
MINIMUM RENT LOW REQUIREMENTS:
UNCONSTRAINED HOUSEHOLDS,
BETWEEN ENROLLMENT AND TWO YEARS
(Friedman and Weinberg, 1979, Figure IV-6)

P I T T S B U R G H

ACTIVE AT TWO YEARS (N=63)	60%	Met Minimum Rent Low Requirements at Enrollment (N=37)	46%	Moved (N=16)	100%	Met at two years (N=16)
					0%	Did not meet at two years (N=0)
			54%	Did not move (N=21)	100%	Met at two years (N=21)
					0%	Did not meet at two years (N=0)
	40%	Did not meet Minimum Rent Low Requirements at Enrollment (N=25)	37%	Moved (N=8)	75%	Met at two years (N=6)
					25%	Did not meet at two years (N=2)
			63%	Did not move (N=17)	24%	Met at two years (N=4)
					76%	Did not meet at two years (N=13)

(missing values = 1)

P H O E N I X

ACTIVE AT TWO YEARS (N=40)	46%	Met Minimum Rent Low Requirements at Enrollment (N=18)	56%	Moved (N=10)	90%	Met at two years (N=9)
					10%	Did not meet at two years (N=1)
			44%	Did not move (N=8)	100%	Met at two years (N=8)
					0%	Did not meet at two years (N=0)
	54%	Did not meet Minimum Rent Low Requirements at Enrollment (N=21)	62%	Moved (N=13)	62%	Met at two years (N=8)
					38%	Did not meet at two years (N=5)
			38%	Did not move (N=8)	12%	Met at two years (N=1)
					88%	Did not meet at two years (N=7)

(missing values = 1)

SAMPLE: Minimum Rent Low households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.
DATA SOURCES: Initial and monthly Household Report Forms, Baseline and Periodic Interviews, and payments file.
NOTE: The number of enrollees that dropped out at two years was 12 in Pittsburgh and 30 in Phoenix.

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Figure 10

THE DYNAMICS OF MEETING
MINIMUM RENT HIGH REQUIREMENTS:
MINIMUM RENT HIGH HOUSEHOLDS,
BETWEEN ENROLLMENT AND TWO YEARS
(Friedman and Weinberg, 1979, Figure IV-7)

P I T T S B U R G H

ACTIVE AT TWO YEARS (N=117)

30%

Met Minimum Rent High Requirements at Enrollment (N=35) — 34% — Moved (N=12) — 100% Met at two years (N=12) / 0% Did not meet at two years (N=0)

— 66% — Did not move (N=23) — 100% Met at two years (N=23) / 0% Did not meet at two years (N=0)

70%

Did not meet Minimum Rent High Requirements at Enrollment (N=82) — 34% — Moved (N=28) — 61% Met at two years (N=17) / 39% Did not meet at two years (N=11)

— 66% — Did not move (N=54) — 17% Met at two years (N=9) / 83% Did not meet at two years (N=45)

(missing values = 0)

P H O E N I X

ACTIVE AT TWO YEARS (N=109)

20%

Met Minimum Rent High Requirements at Enrollment (N=21) — 67% — Moved (N=14) — 93% Met at two years (N=13) / 7% Did not meet at two years (N=1)

— 33% — Did not move (N=7) — 100% Met at two years (N=7) / 0% Did not meet at two years (N=0)

80%

Did not meet Minimum Rent High Requirements at Enrollment (N=84) — 65% — Moved (N=55) — 58% Met at two years (N=32) / 42% Did not meet at two years (N=23)

— 35% — Did not move (N=29) — 3% Met at two years (N=1) / 97% Did not meet at two years (N=28)

(missing values = 4)

SAMPLE: Minimum Rent High households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.

DATA SOURCES: Initial and monthly Household Report Forms, Baseline and Periodic Interviews, and payments file.

NOTE: The number of enrollees that dropped out at two years was 62 in Pittsburgh and 82 in Phoenix.

50

Figure 11

THE DYNAMICS OF MEETING
MINIMUM RENT HIGH REQUIREMENTS:
CONTROL HOUSEHOLDS,
BETWEEN ENROLLMENT AND TWO YEARS
(Friedman and Weinberg, 1979, Figure IV-8)

P I T T S B U R G H

ACTIVE AT TWO YEARS (N=321)

31% → Met Minimum Rent High Requirements at Enrollment (N=98)

42% → Moved (N=41)
- 85% Met at two years (N=35)
- 15% Did not meet at two years (N=6)

58% → Did not move (N=57)
- 100% Met at two years (N=57)
- 0% Did not meet at two years (N=0)

69% → Did not meet Minimum Rent High Requirements at Enrollment (N=221)

32% → Moved (N=71)
- 42% Met at two years (N=30)
- 58% Did not meet at two years (N=41)

68% → Did not move (N=150)
- 13% Met at two years (N=19)
- 87% Did not meet at two years (N=131)

(missing values = 2)

P H O E N I X

ACTIVE AT TWO YEARS (N=282)

24% → Met Minimum Rent High Requirements at Enrollment (N=65)

51% → Moved (N=33)
- 82% Met at two years (N=27)
- 18% Did not meet at two years (N=6)

49% → Did not move (N=32)
- 100% Met at two years (N=32)
- 0% Did not meet at two years (N=0)

76% → Did not meet Minimum Rent High Requirements at Enrollment (N=210)

52% → Moved (N=110)
- 24% Met at two years (N=26)
- 76% Did not meet at two years (N=84)

48% → Did not move (N=100)
- 6% Met at two years (N=6)
- 94% Did not meet at two years (N=94)

(missing values = 7)

SAMPLE: Control households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.
DATA SOURCES: Initial and monthly Household Report Forms, Baseline and Periodic Interviews, and payments file.
NOTE: The number of enrollees that dropped out at two years was 113 in Pittsburgh and 243 in Phoenix.

51

Figure 12

THE DYNAMICS OF MEETING
MINIMUM RENT HIGH REQUIREMENTS:
UNCONSTRAINED HOUSEHOLDS,
BETWEEN ENROLLMENT AND TWO YEARS
(Friedman and Weinberg, 1979, Figure IV-9)

P I T T S B U R G H

P H O E N I X

SAMPLE: Unconstrained households active at two years after enrollment excluding those with
enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.
DATA SOURCES: Initial and monthly Household Report Forms, Baseline and Periodic Interviews, and
payments file.
NOTE: The number of enrollees that dropped out at two years was 12 in Pittsburgh and 30 in Phoenix.
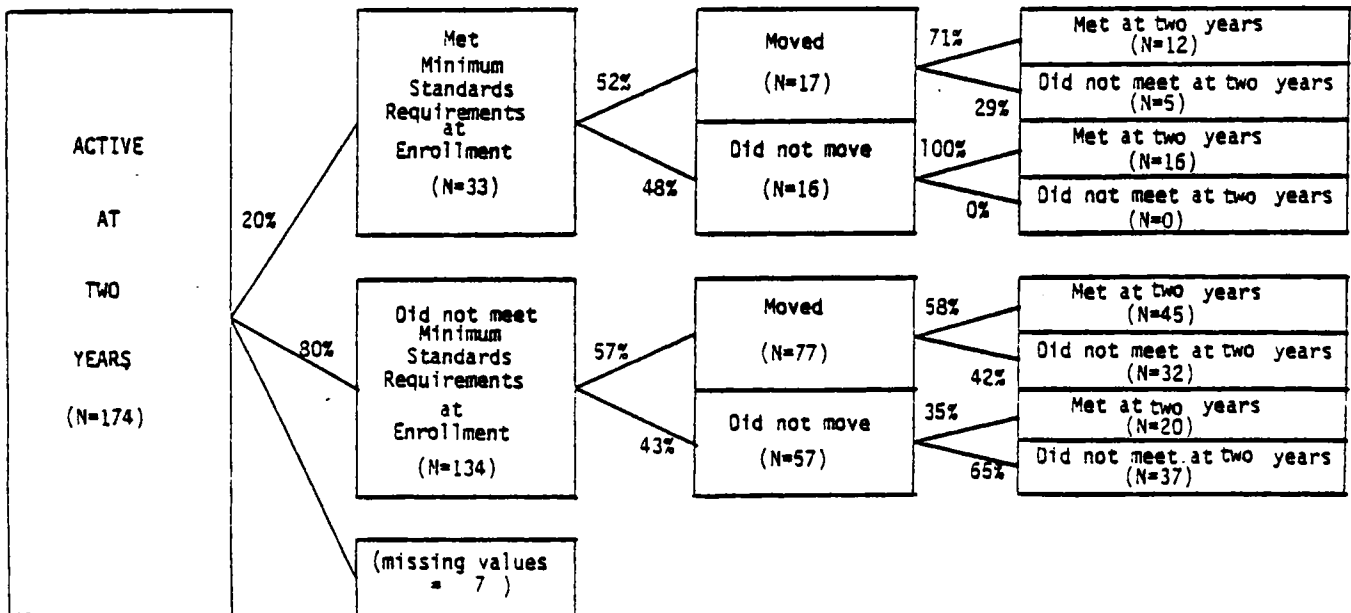
52

Figure 13

THE DYNAMICS OF MEETING
MINIMUM STANDARDS REQUIREMENTS:
MINIMUM STANDARDS HOUSEHOLDS,
BETWEEN ENROLLMENT AND ONE YEAR
(Friedman and Weinberg, 1979, Figure IV-10)

P I T T S B U R G H

```
                                                                      ┌──────────────────────┐
                                                                      │  Met at one year     │
                                                                      │     (N=5)            │
                           ┌──────────────┐  62%  ├──────────────────────┤
                           │    Moved     │◄──────┤  Did not meet at one  │
                     18%   │              │       │  year  (N=3)         │
          ┌──────────────┐◄──────────────┤   (N=8)      │  38%  └──────────────────────┘
          │     Met      │                └──────────────┘
          │   Minimum    │                ┌──────────────┐  100% ┌──────────────────────┐
          │  Standards   │                │ Did not move │◄──────┤  Met at one year     │
          │ Requirements │◄───────────────┤              │       │     (N=36)           │
          │     at       │          82%   │   (N=36)     │  0%   ├──────────────────────┤
          │  Enrollment  │                └──────────────┘◄──────┤ Did not meet at one  │
┌───────┐ │   (N=44)     │                                       │  year  (N=0)         │
│       │◄└──────────────┘                                       └──────────────────────┘
│ACTIVE │  22%
│       │
│  AT   │
│       │                                                        ┌──────────────────────┐
│ TWO   │         ┌──────────────┐        ┌──────────────┐  41%  │  Met at one year     │
│       │         │  Did not meet│        │    Moved     │◄──────┤     (N=18)           │
│ YEARS │  78%    │   Minimum    │   28%  │              │       ├──────────────────────┤
│       │◄────────┤  Standards   │◄───────┤   (N=44)     │  59%  │ Did not meet at one  │
│(N=204)│         │ Requirements │        └──────────────┘◄──────┤  year  (N=26)        │
│       │         │     at       │        ┌──────────────┐  21%  └──────────────────────┘
└───────┘         │  Enrollment  │        │ Did not move │◄──────┌──────────────────────┐
                  │   (N=158)    │◄───────┤              │       │  Met at one year     │
                  └──────────────┘  72%   │   (N=114)    │       │     (N=24)           │
                                          └──────────────┘  79%  ├──────────────────────┤
                  ┌──────────────┐                        ◄──────┤ Did not meet at one  │
                  │(missing values│                              │  year  (N=90)        │
                  │    = 2  )    │                              └──────────────────────┘
                  └──────────────┘
```

P H O E N I X

```
                                                                      ┌──────────────────────┐
                                                                      │  Met at one year     │
                           ┌──────────────┐  70%  ┌──────────────────────┤     (N=7)            │
                           │    Moved     │◄──────┤                       ├──────────────────────┤
                     30%   │              │       │  Did not meet at one  │
          ┌──────────────┐◄──────────────┤   (N=10)     │  30%  │  year  (N=3)         │
          │     Met      │                └──────────────┘       └──────────────────────┘
          │   Minimum    │                ┌──────────────┐  100% ┌──────────────────────┐
          │  Standards   │                │ Did not move │◄──────┤  Met at one year     │
          │ Requirements │◄───────────────┤              │       │     (N=23)           │
          │     at       │          70%   │   (N=23)     │  0%   ├──────────────────────┤
          │  Enrollment  │                └──────────────┘◄──────┤ Did not meet at one  │
┌───────┐ │   (N=33)     │                                       │  year  (N=0)         │
│       │◄└──────────────┘                                       └──────────────────────┘
│ACTIVE │  20%
│       │
│  AT   │
│       │                                                        ┌──────────────────────┐
│ TWO   │         ┌──────────────┐        ┌──────────────┐  57%  │  Met at one year     │
│       │         │  Did not meet│        │    Moved     │◄──────┤     (N=35)           │
│ YEARS │  80%    │   Minimum    │   45%  │              │       ├──────────────────────┤
│       │◄────────┤  Standards   │◄───────┤   (N=61)     │  43%  │ Did not meet at one  │
│(N=174)│         │ Requirements │        └──────────────┘◄──────┤  year  (N=26)        │
│       │         │     at       │        ┌──────────────┐  27%  └──────────────────────┘
└───────┘         │  Enrollment  │        │ Did not move │◄──────┌──────────────────────┐
                  │   (N=135)    │◄───────┤              │       │  Met at one year     │
                  └──────────────┘  55%   │   (N=74)     │       │     (N=20)           │
                                          └──────────────┘  73%  ├──────────────────────┤
                  ┌──────────────┐                        ◄──────┤ Did not meet at one  │
                  │(missing values│                              │  year  (N=54)        │
                  │    = 6  )    │                              └──────────────────────┘
                  └──────────────┘
```
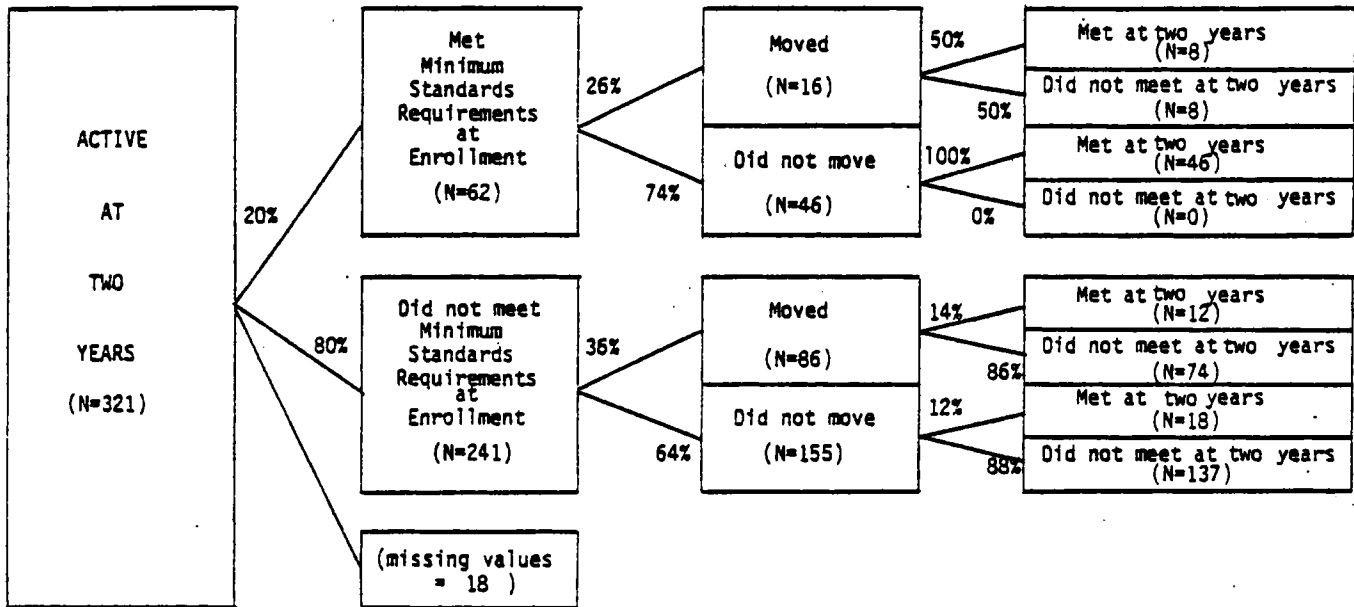
SAMPLE: Minimum Standards households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.

DATA SOURCES: Initial and monthly Household Report Forms, Baseline and Periodic Interviews, and payments file.

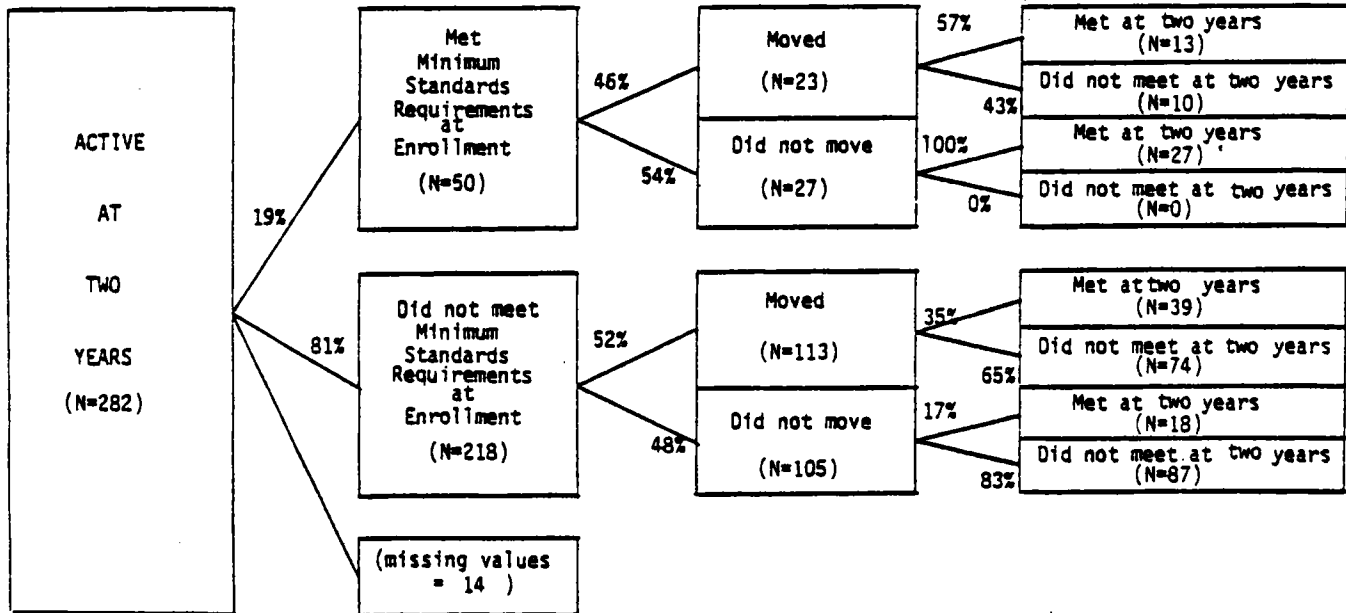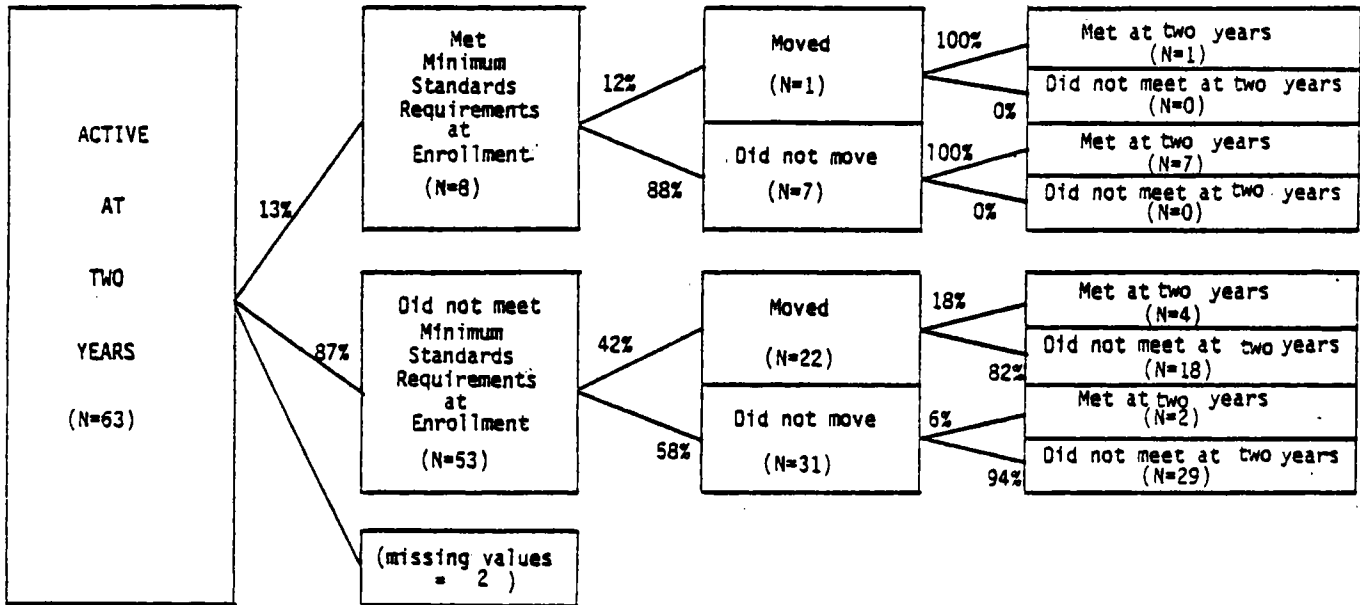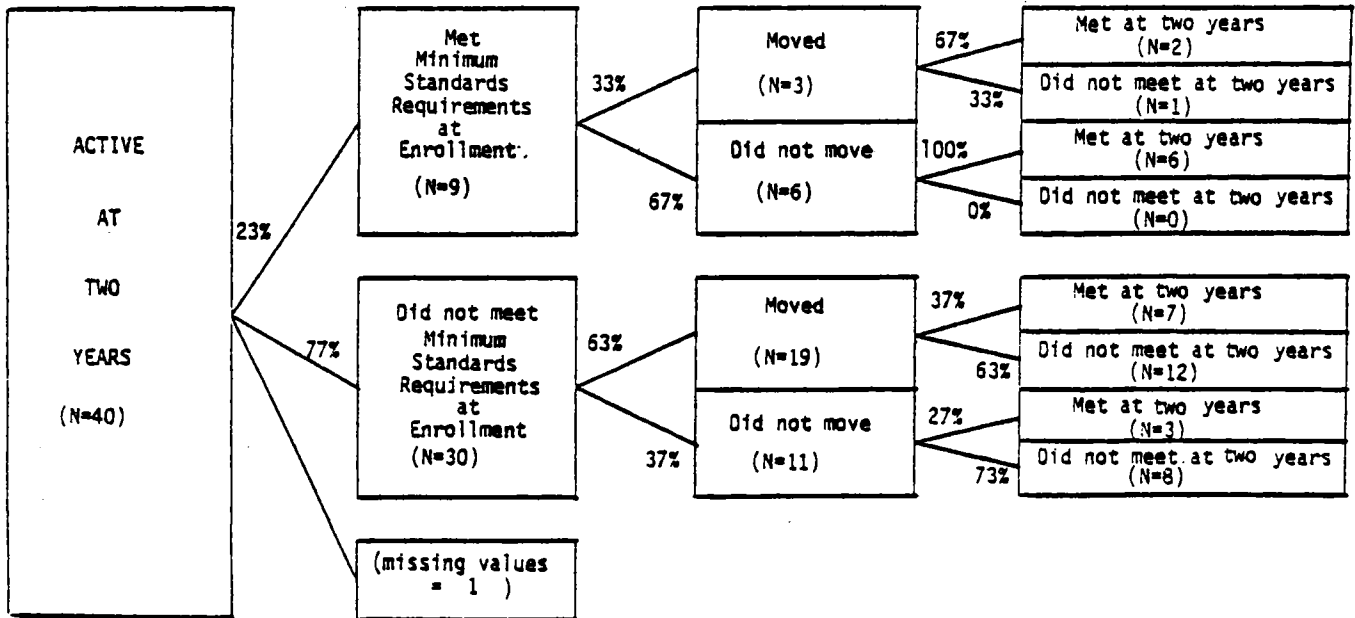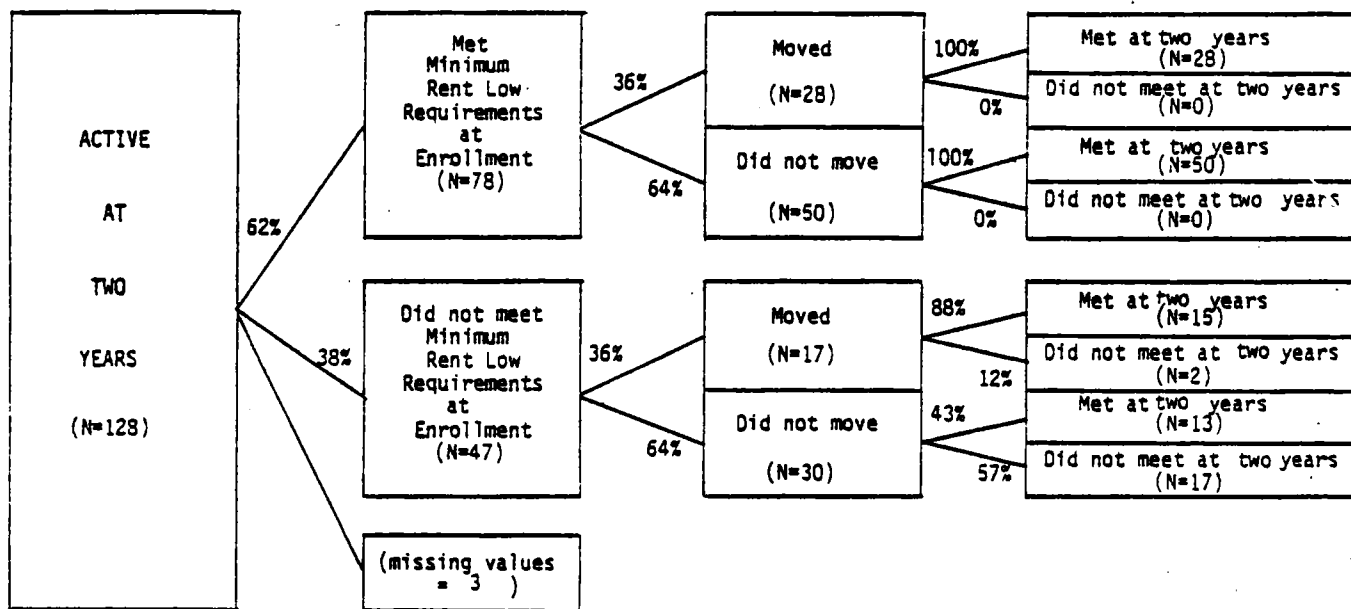NOTE: The number of enrollees that dropped out at two years was 77 in Pittsburgh and 155 in Phoenix.
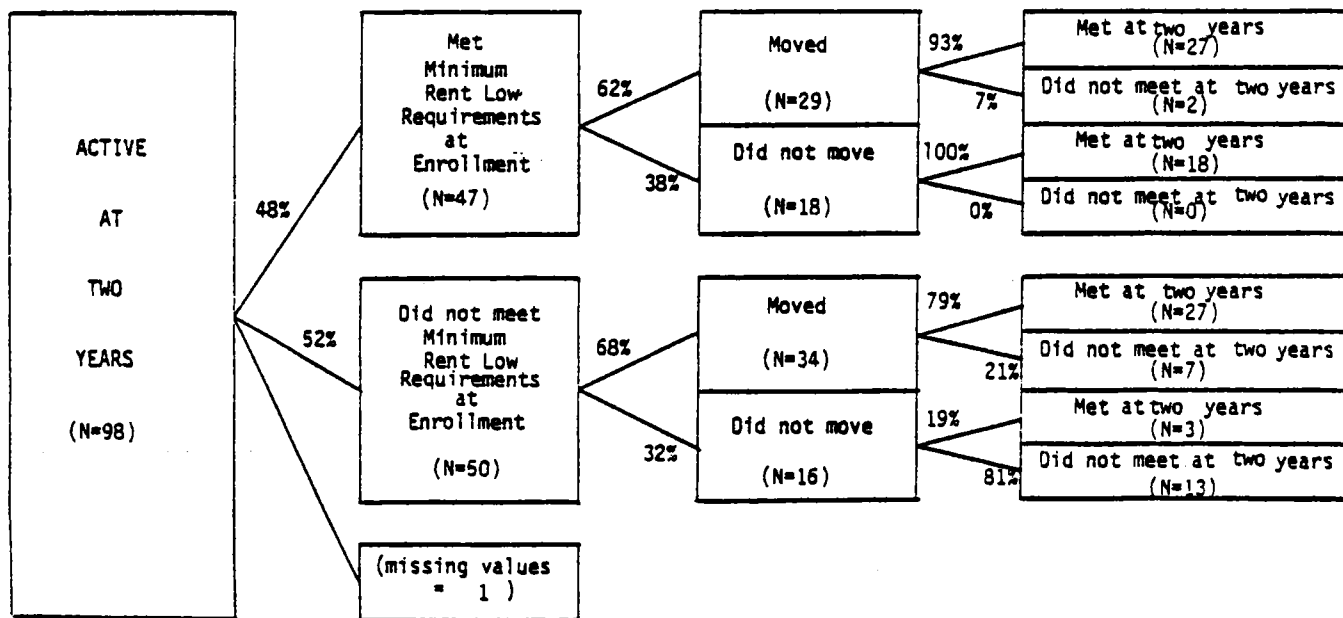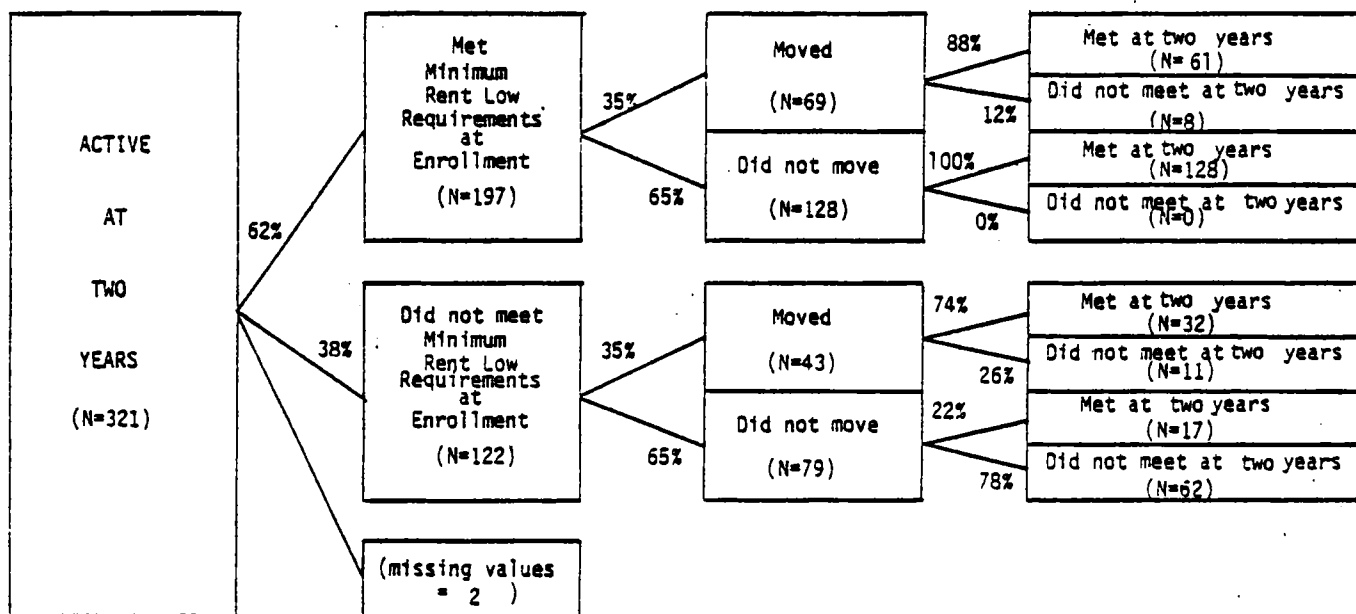
Figure 14

THE DYNAMICS OF MEETING
MINIMUM STANDARDS REQUIREMENTS:
CONTROL HOUSEHOLDS,
BETWEEN ENROLLMENT AND ONE YEAR
(Friedman and Weinberg, 1979, Figure IV-11)

P I T T S B U R G H

```
                                            Moved        25%    Met at one year
                         Met                                    (N=2)
                         Minimum                (N=8)          Did not meet at one year
                         Standards    13%                 75%   (N=6)
              20%        Requirements                    100%   Met at one year
ACTIVE                   at                                     (N=54)
                         Enrollment    87%   Did not move        Did not meet at one year
AT                                                          0%   (N=0)
                         (N=62)              (N=54)

TWO
                                            Moved        13%    Met at one year
                         Did not meet                           (N=8)
YEARS        80%         Minimum              (N=62)            Did not meet at one year
                         Standards    25%                 87%   (N=54)
(N=321)                  Requirements                      9%   Met at one year
                         at                  Did not move        (N=16)
                         Enrollment    75%                       Did not meet at one year
                         (N=250)             (N=188)      91%   (N=172)

                         (missing values
                          = 9 )
```

P H O E N I X

```
                                            Moved        35%    Met at one year
                         Met                                    (N=6)
                         Minimum              (N=17)           Did not meet at one year
                         Standards    34%                 65%   (N=11)
              19%        Requirements                    100%   Met at one year
ACTIVE                   at                                     (N=33)
                         Enrollment    66%   Did not move        Did not meet at one year
AT                                                          0%   (N=0)
                         (N=50)              (N=33)

TWO
                                            Moved        30%    Met at one year
                         Did not meet                           (N=27)
YEARS        81%         Minimum              (N=89)            Did not meet at one year
                         Standards    41%                 70%   (N=62)
(N=282)                  Requirements                     12%   Met at one year
                         at                  Did not move        (N=15)
                         Enrollment    59%                       Did not meet at one year
                         (N=216)             (N=127)      88%   (N=112)

                         (missing values
                          = 16 )
```

SAMPLE: Control households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.

DATA SOURCES: Initial and monthly Household Report Forms, Baseline and Periodic Interviews, and payments file.

NOTE: The number of enrollees that dropped out at two years was 113 in Pittsburgh and 243 in Phoenix.
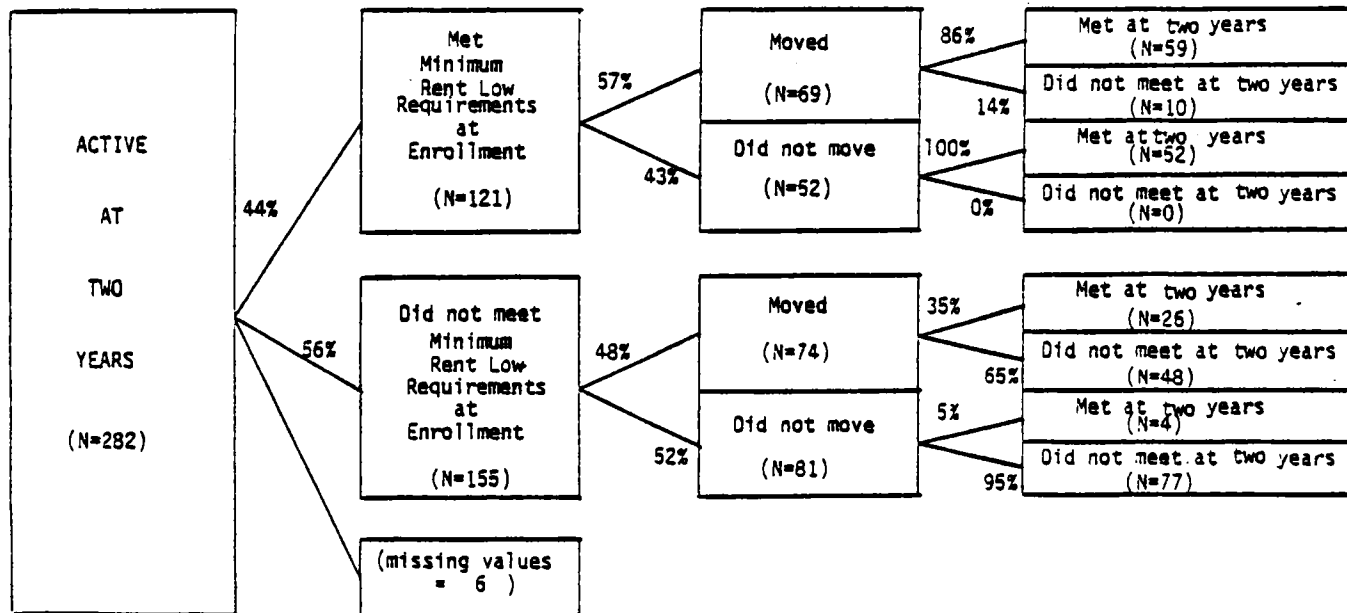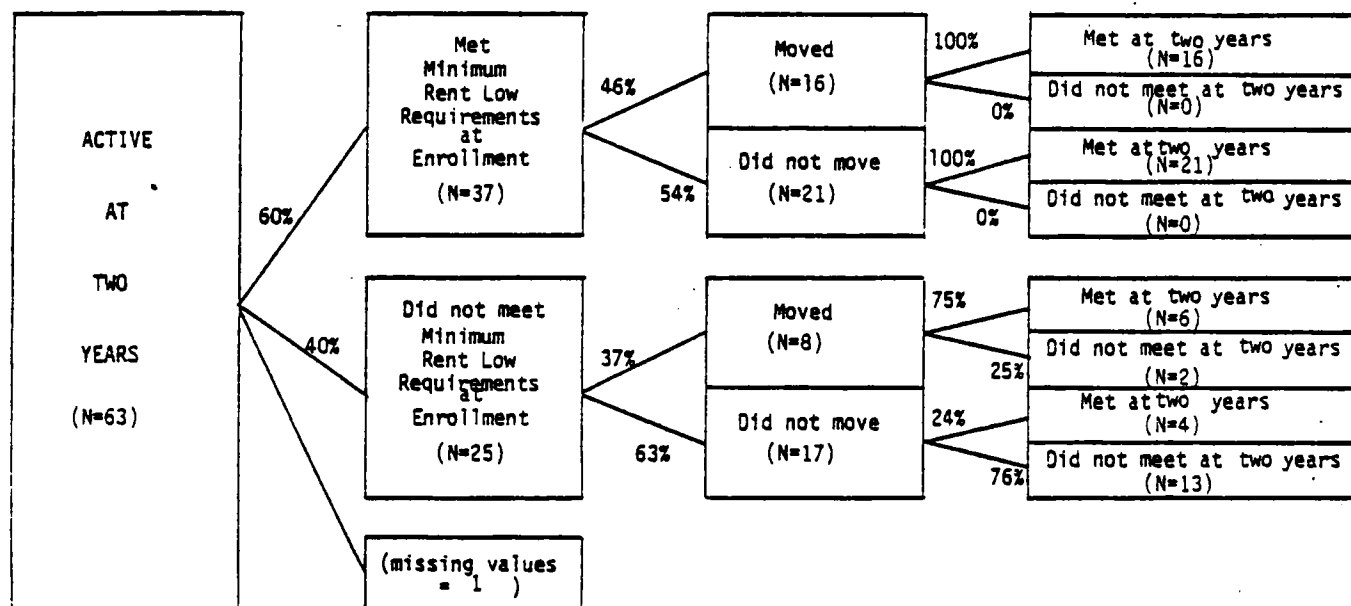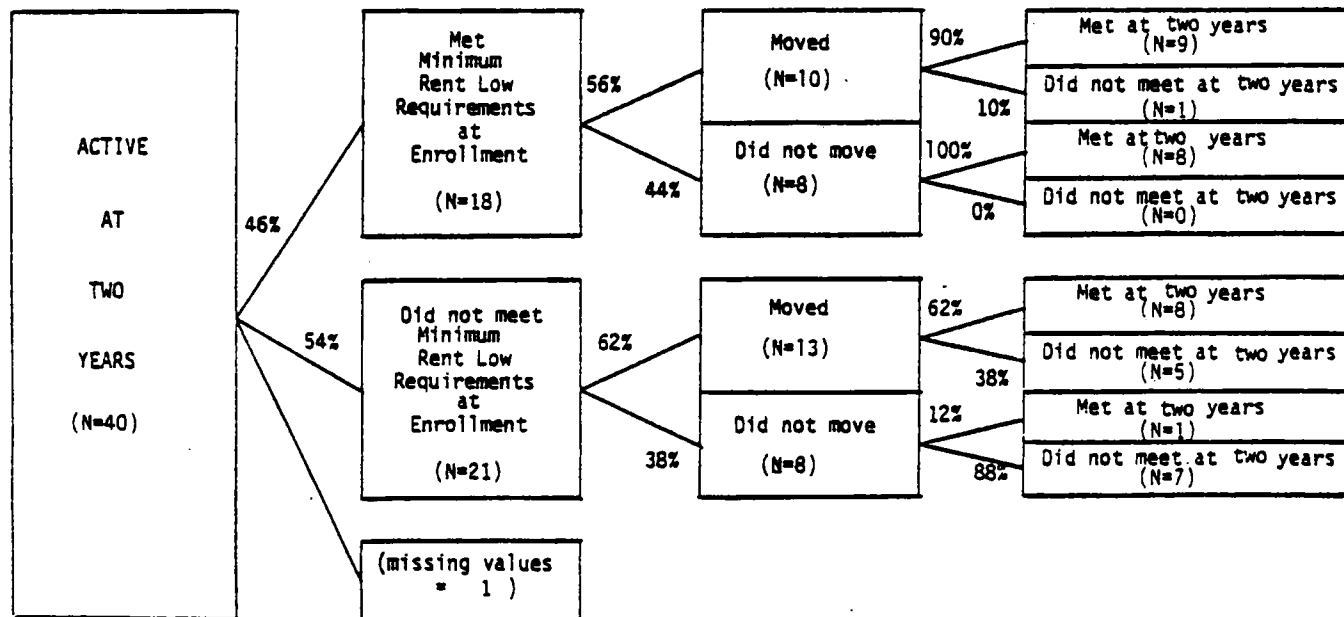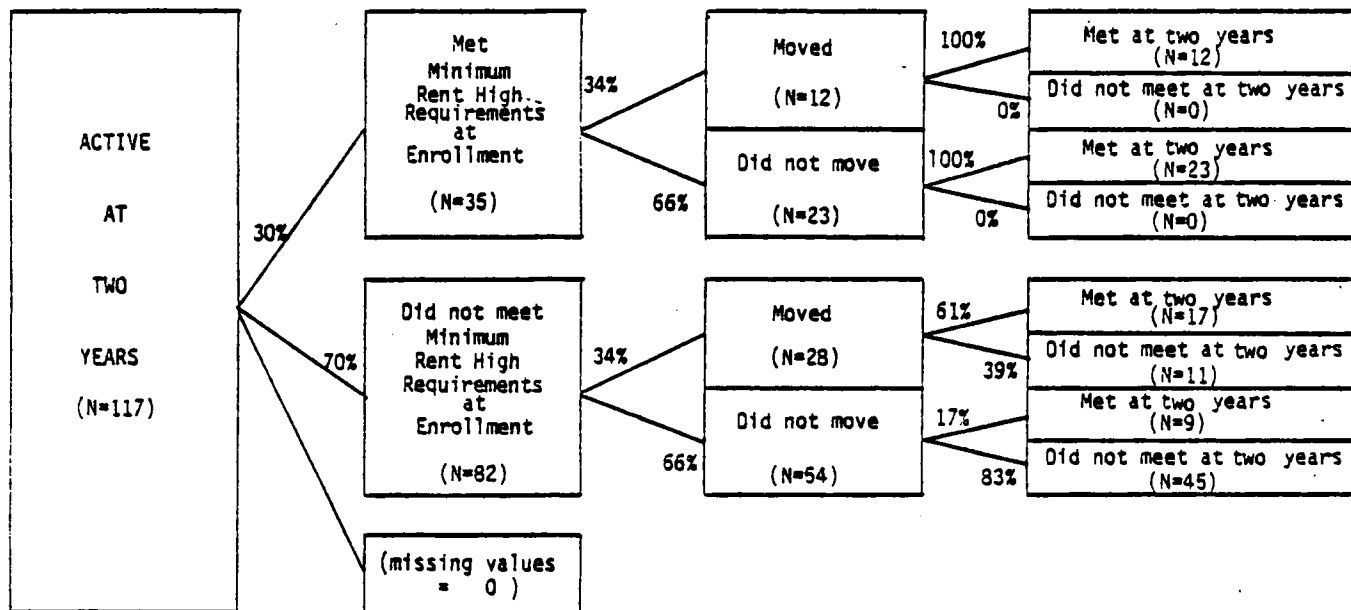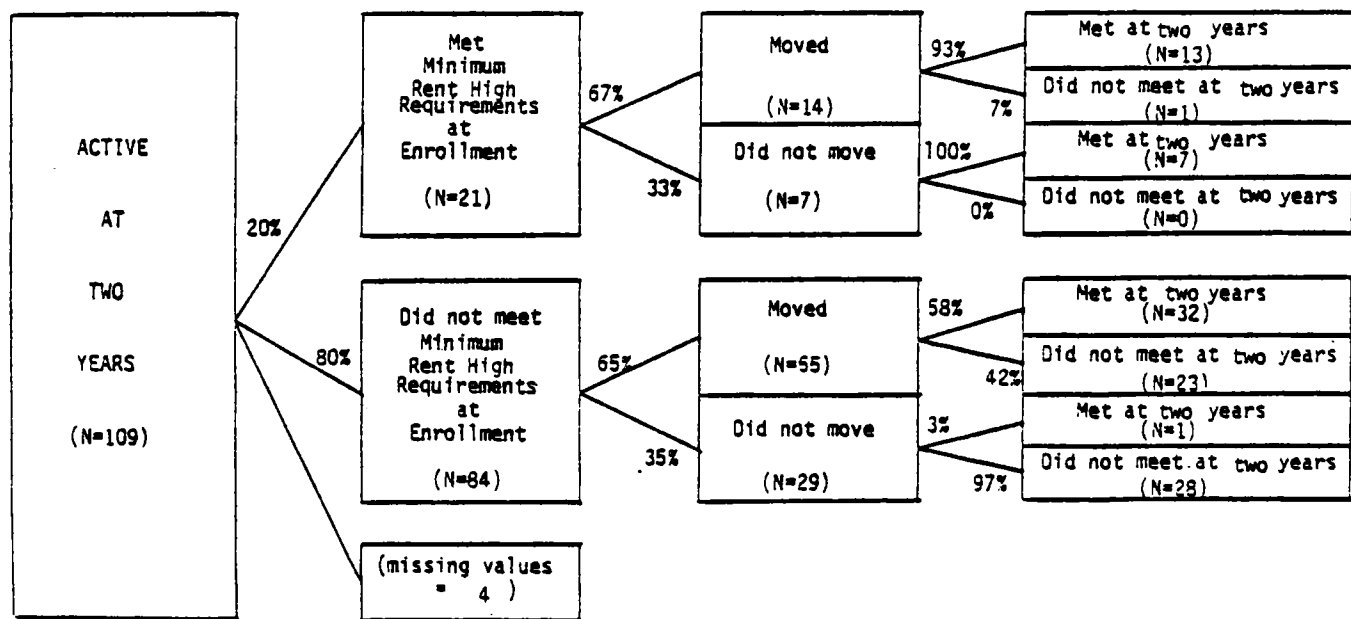
54

Figure 15

THE DYNAMICS OF MEETING
MINIMUM STANDARDS REQUIREMENTS:
UNCONSTRAINED HOUSEHOLDS:
BETWEEN ENROLLMENT AND ONE YEAR
(Friedman and Weinberg, 1979, Figure IV-12)

PITTSBURGH

```
                        ┌────────────────┐              ┌──────────┐   100%  ┌──────────────────────────┐
                        │      Met       │     12%      │  Moved   │─────────│   Met at one year         │
                        │    Minimum     │──────────────│  (N=1)   │         │       (N=1)               │
                        │   Standards    │              │          │         ├──────────────────────────┤
                        │  Requirements  │              │          │    0%   │ Did not meet at one year  │
                        │      at        │              │          │         │       (N=0)               │
                        │   Enrollment   │              ├──────────┤   100%  ├──────────────────────────┤
                        │    (N=8)       │     88%      │ Did not  │─────────│   Met at one year         │
                        │                │──────────────│  move    │         │       (N=7)               │
                        │                │              │  (N=7)   │         ├──────────────────────────┤
                        │                │              │          │    0%   │ Did not meet at one year  │
┌──────────────┐        └────────────────┘              └──────────┘         │       (N=0)               │
│              │   13%                                                        └──────────────────────────┘
│   ACTIVE     │─────────
│              │
│     AT       │        ┌────────────────┐              ┌──────────┐    6%   ┌──────────────────────────┐
│              │        │  Did not meet  │     33%      │  Moved   │─────────│   Met at one year         │
│    TWO       │        │    Minimum     │──────────────│  (N=17)  │         │       (N=1)               │
│              │   87%  │   Standards    │              │          │         ├──────────────────────────┤
│    YEARS     │────────│  Requirements  │              │          │   94%   │ Did not meet at one year  │
│              │        │      at        │              │          │         │       (N=16)              │
│   (N=63)     │        │   Enrollment   │              ├──────────┤    9%   ├──────────────────────────┤
│              │        │    (N=52)      │     67%      │ Did not  │─────────│   Met at one year         │
│              │        │                │──────────────│  move    │         │       (N=3)               │
│              │        └────────────────┘              │  (N=35)  │         ├──────────────────────────┤
│              │                                        │          │   91%   │ Did not meet at one year  │
└──────────────┘        ┌────────────────┐              └──────────┘         │       (N=32)              │
                        │ (missing values│                                   └──────────────────────────┘
                        │     = 3  )     │
                        └────────────────┘
```

PHOENIX

```
                        ┌────────────────┐              ┌──────────┐   67%   ┌──────────────────────────┐
                        │      Met       │     33%      │  Moved   │─────────│   Met at one year         │
                        │    Minimum     │──────────────│  (N=3)   │         │       (N=2)               │
                        │   Standards    │              │          │         ├──────────────────────────┤
                        │  Requirements  │              │          │   33%   │ Did not meet at one year  │
                        │      at        │              │          │         │       (N=1)               │
                        │   Enrollment   │              ├──────────┤   100%  ├──────────────────────────┤
                        │    (N=9)       │     67%      │ Did not  │─────────│   Met at one year         │
                        │                │──────────────│  move    │         │       (N=6)               │
                        │                │              │  (N=6)   │         ├──────────────────────────┤
                        │                │              │          │    0%   │ Did not meet at one year  │
┌──────────────┐        └────────────────┘              └──────────┘         │       (N=0)               │
│              │   24%                                                        └──────────────────────────┘
│   ACTIVE     │─────────
│              │
│     AT       │        ┌────────────────┐              ┌──────────┐   47%   ┌──────────────────────────┐
│              │        │  Did not meet  │     52%      │  Moved   │─────────│   Met at one year         │
│    TWO       │        │    Minimum     │──────────────│  (N=15)  │         │       (N=7)               │
│              │   76%  │   Standards    │              │          │         ├──────────────────────────┤
│    YEARS     │────────│  Requirements  │              │          │   53%   │ Did not meet at one year  │
│              │        │      at        │              │          │         │       (N=8)               │
│   (N=40)     │        │   Enrollment   │              ├──────────┤   14%   ├──────────────────────────┤
│              │        │    (N=29)      │     48%      │ Did not  │─────────│   Met at one year         │
│              │        │                │──────────────│  move    │         │       (N=2)               │
│              │        └────────────────┘              │  (N=14)  │         ├──────────────────────────┤
│              │                                        │          │   86%   │ Did not meet at one year  │
└──────────────┘        ┌────────────────┐              └──────────┘         │       (N=12)              │
                        │ (missing values│                                   └──────────────────────────┘
                        │     = 2  )     │
                        └────────────────┘
```

SAMPLE: Unconstrained households active at two years after enrollment, excluding those with
enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.
     DATA SOURCES: Initial and monthly Household Report Forms, Baseline and Periodic Interviews, and
payments file.
     NOTE: The number of enrollees that dropped out at two years was 12 in Pittsburgh and 30 in Phoenix.

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Figure 16

THE DYNAMICS OF MEETING
MINIMUM RENT LOW REQUIREMENTS:
MINIMUM RENT LOW HOUSEHOLDS,
BETWEEN ENROLLMENT AND ONE YEAR
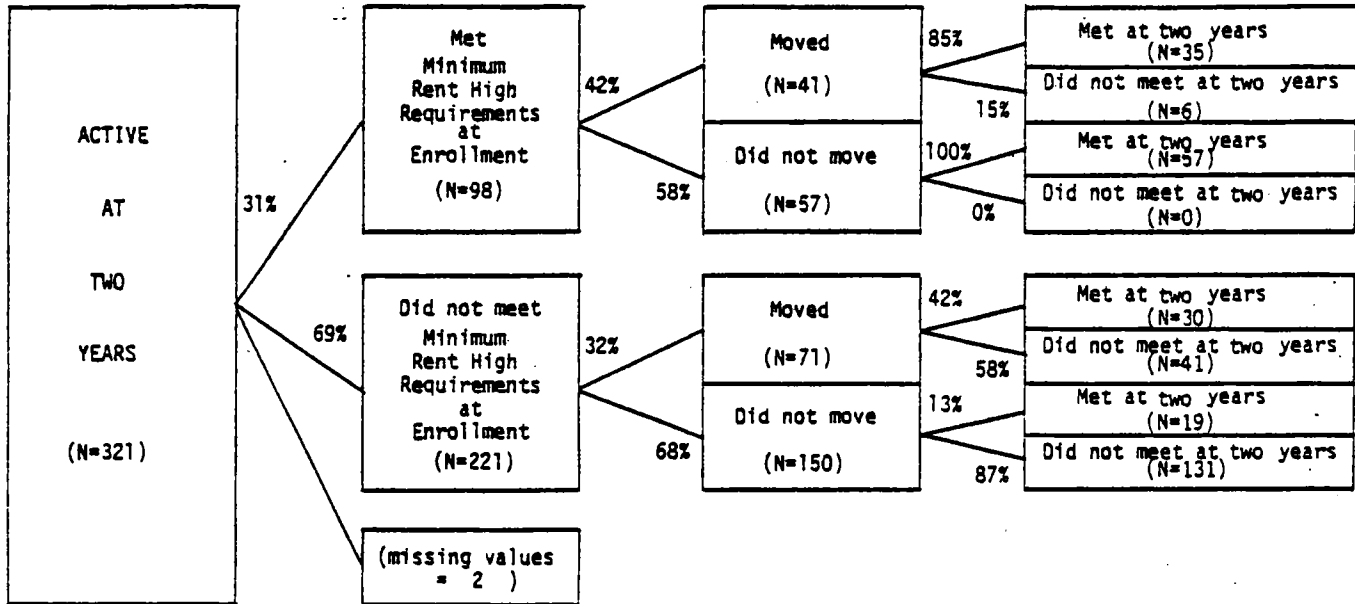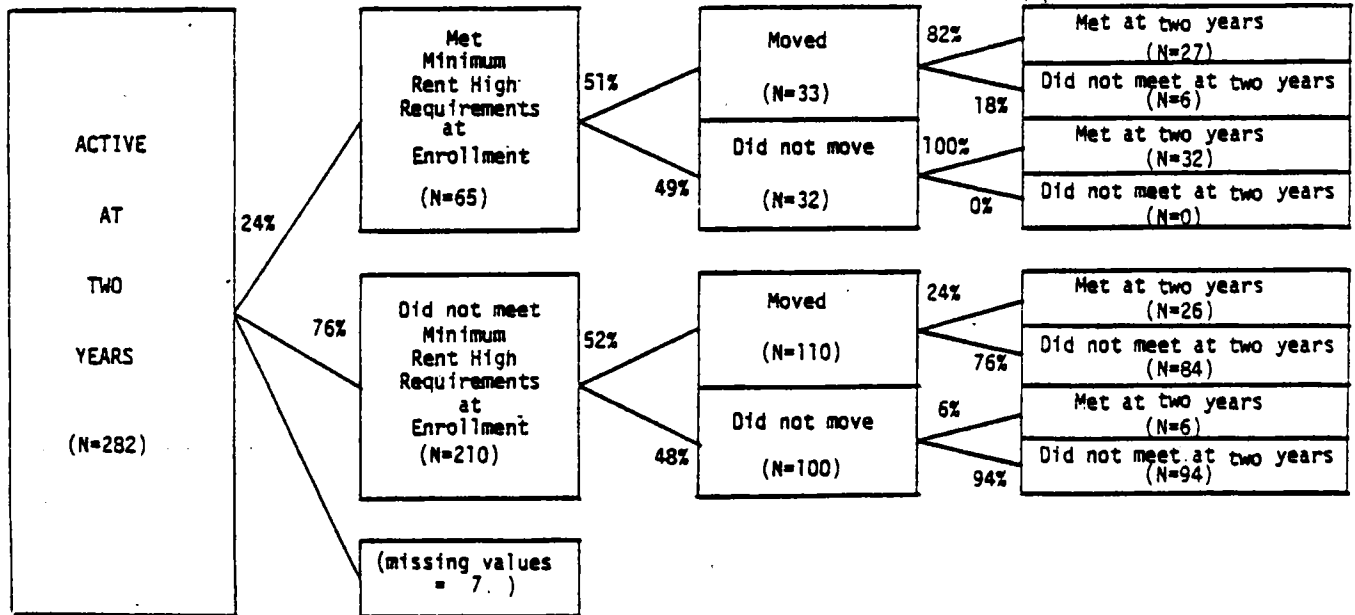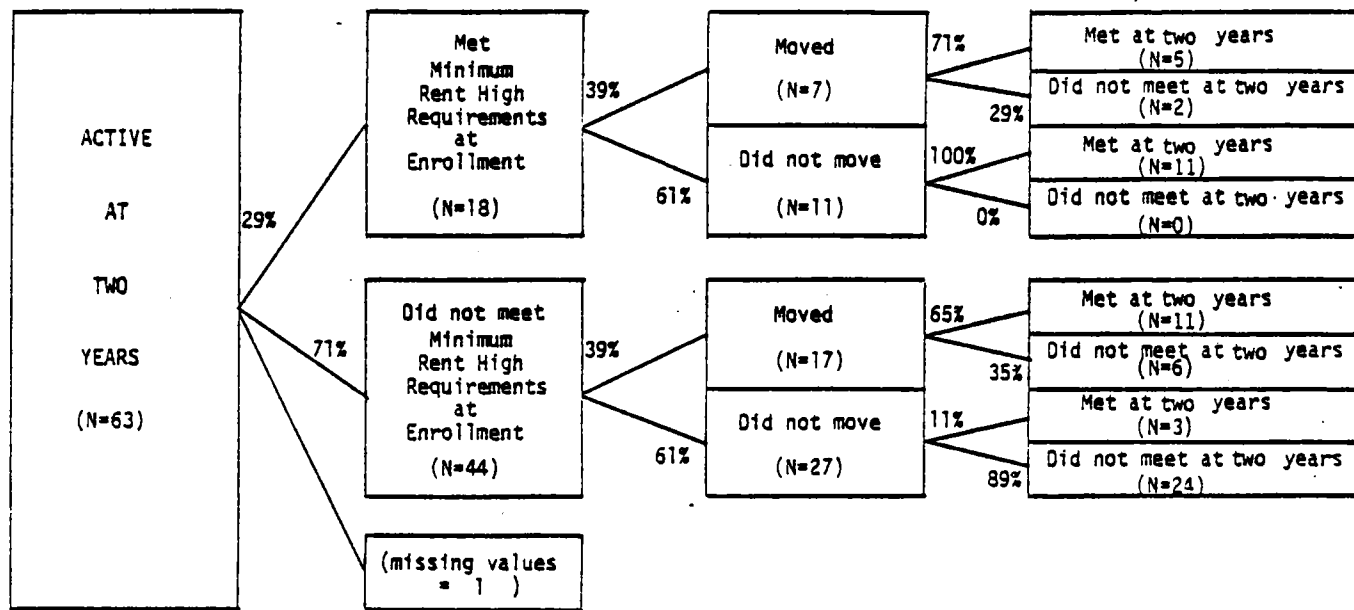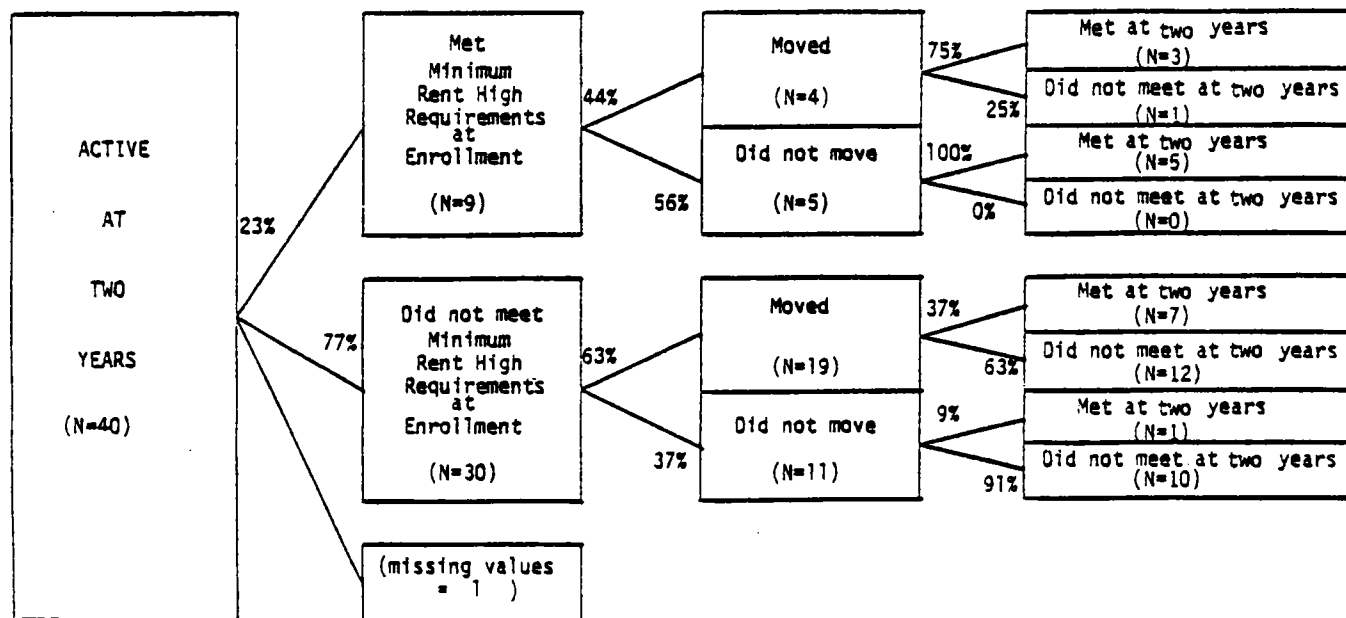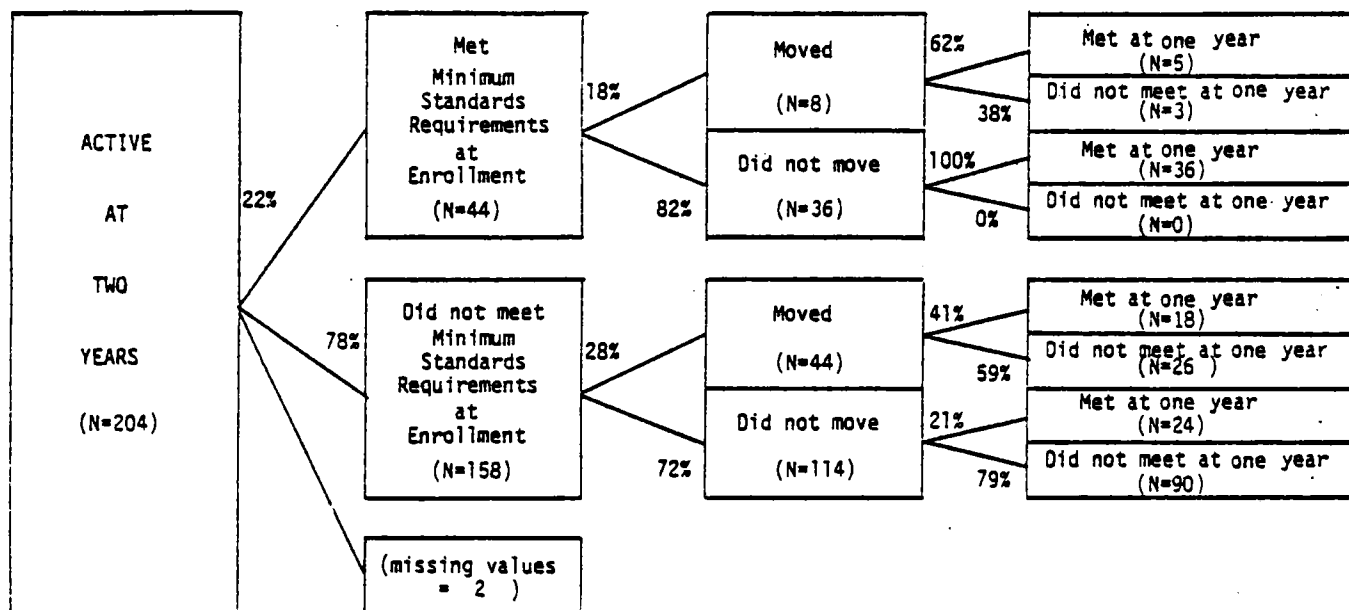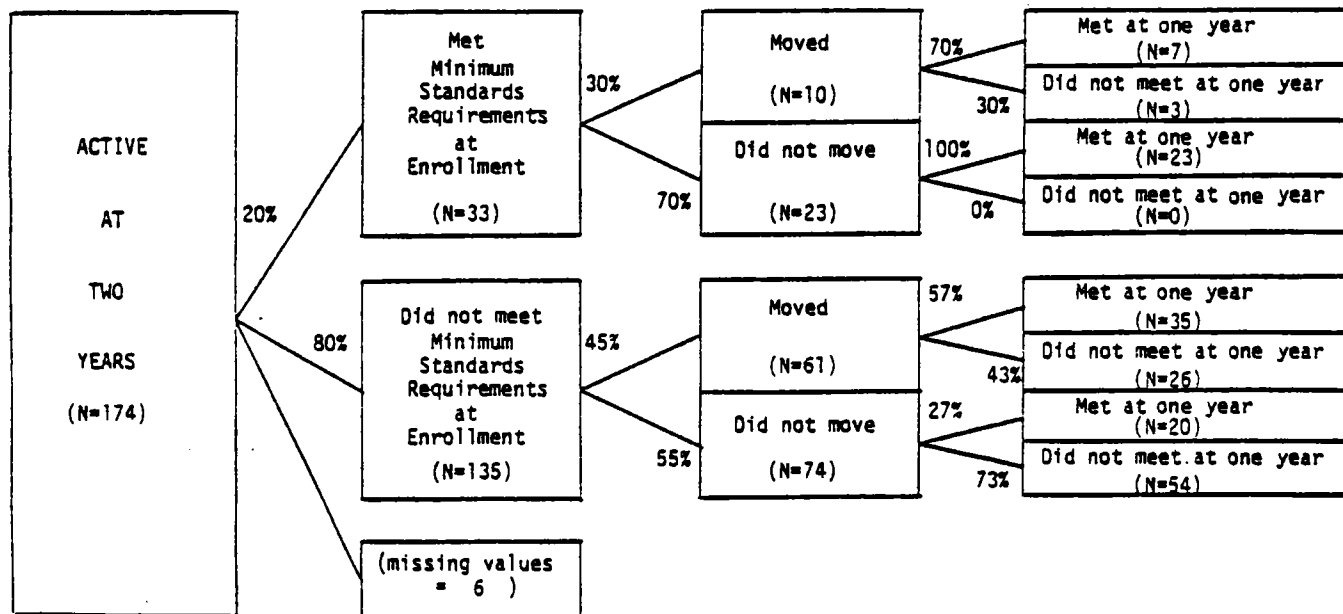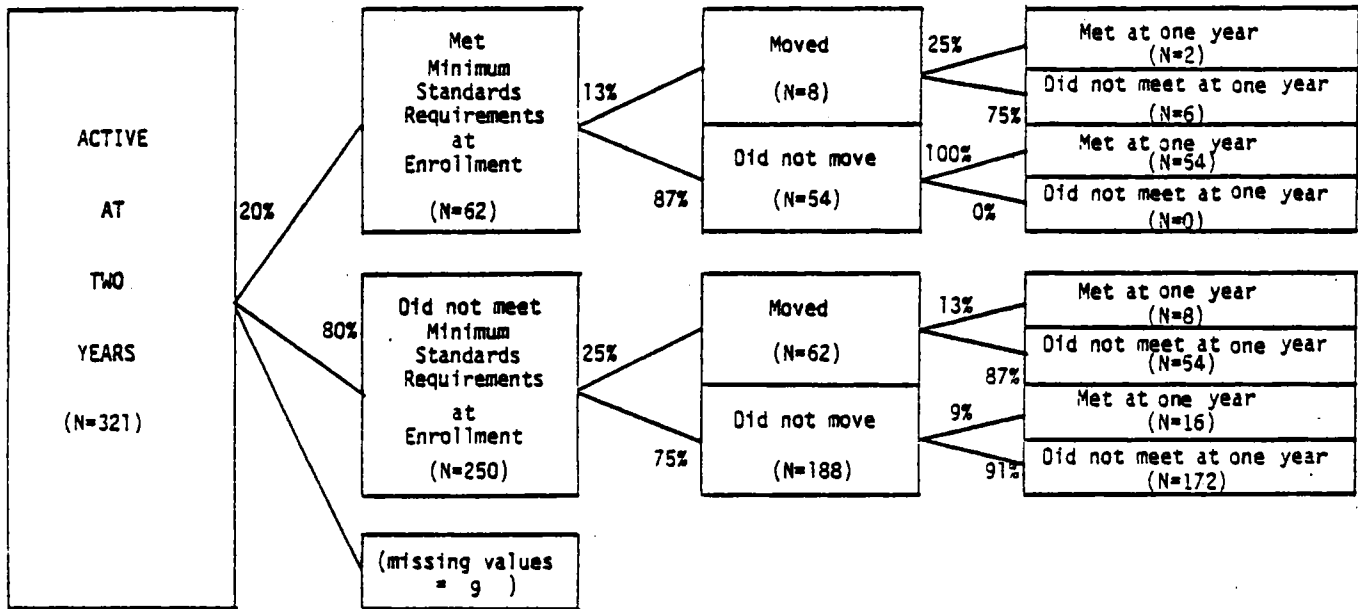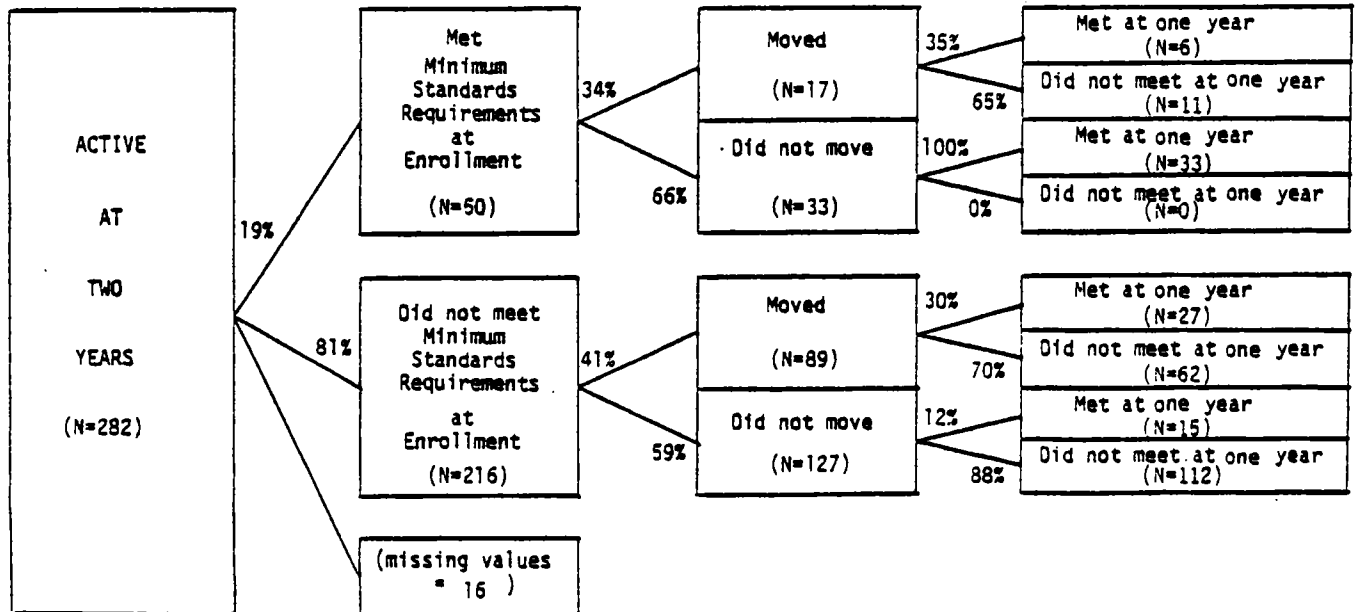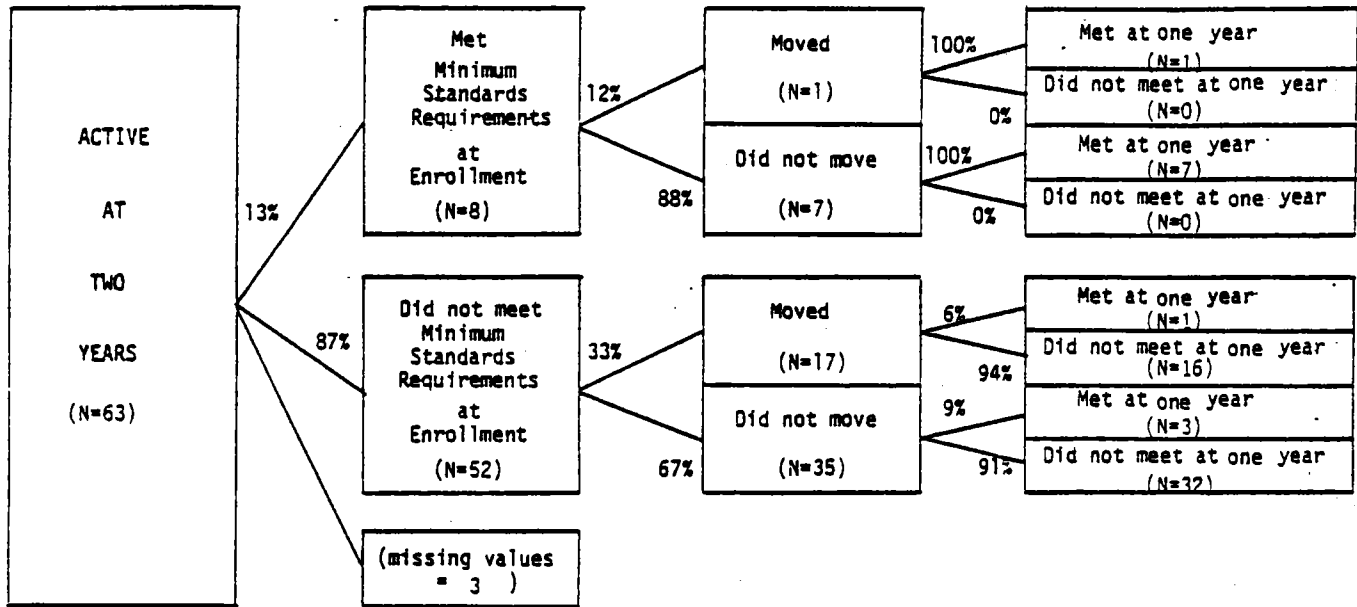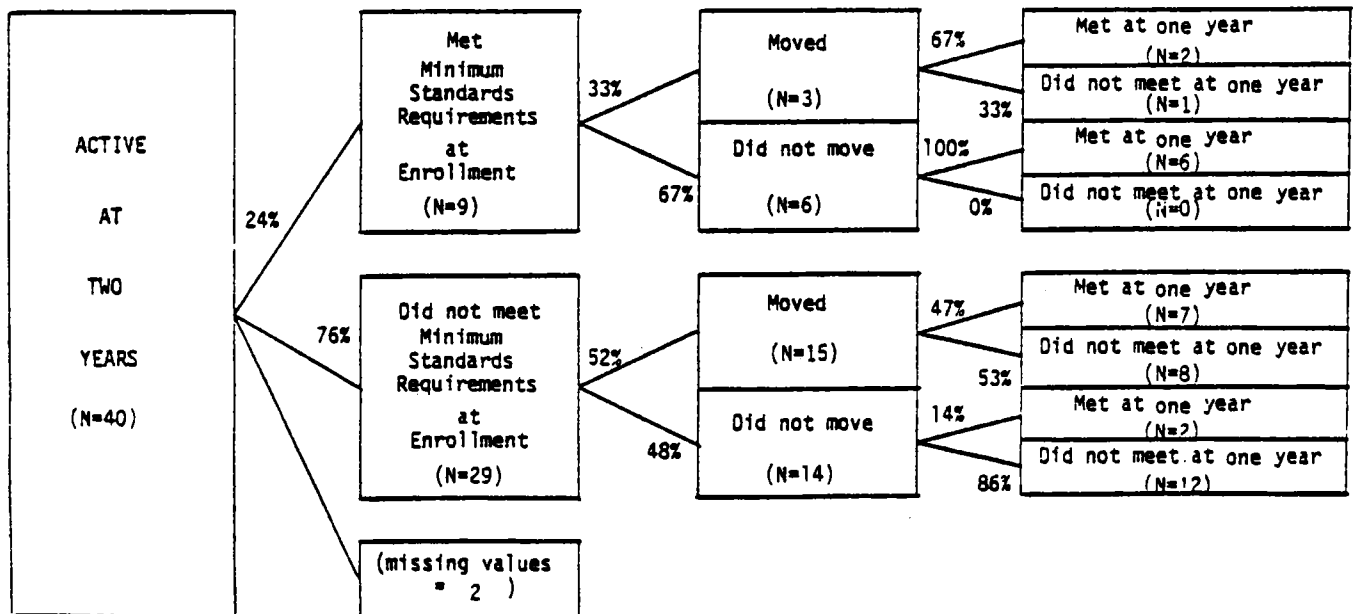(Friedman and Weinberg, 1979, Figure IV-13)

P I T T S B U R G H

P H O E N I X

SAMPLE: Minimum Rent Low households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.
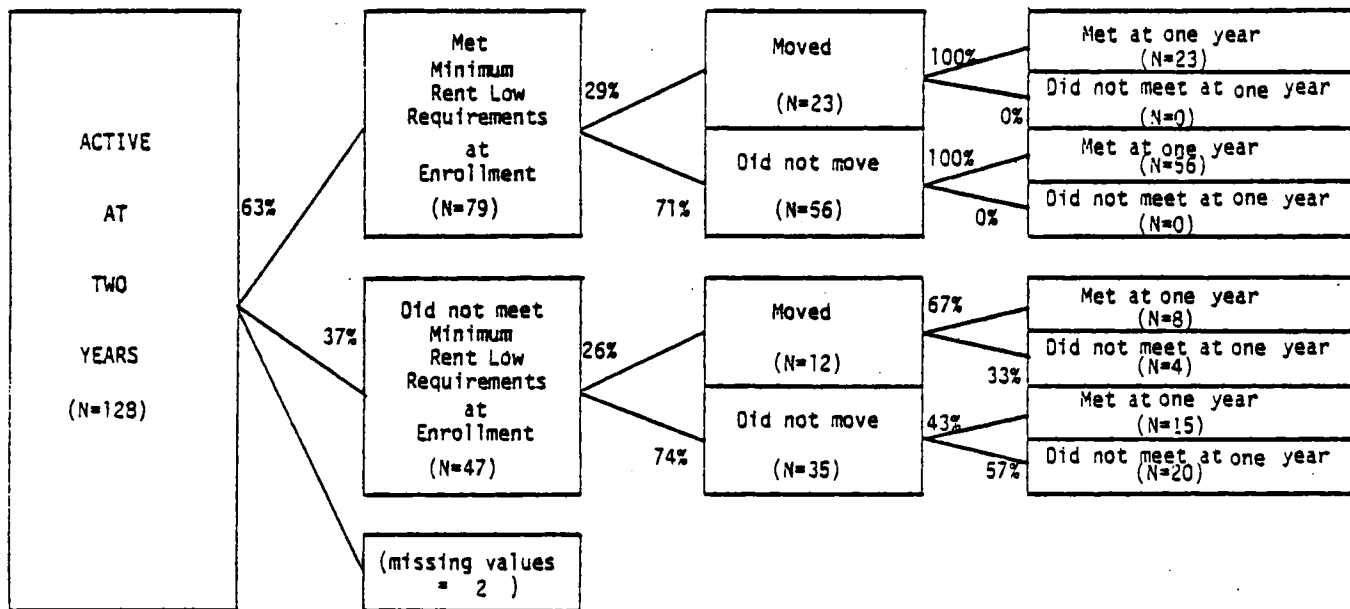DATA SOURCES: Initial and monthly Household Report Forms, Baseline and Periodic Interviews, and payments file.
NOTE: The number of enrollees that dropped out at two years was 38 in Pittsburgh and 77 in Phoenix.
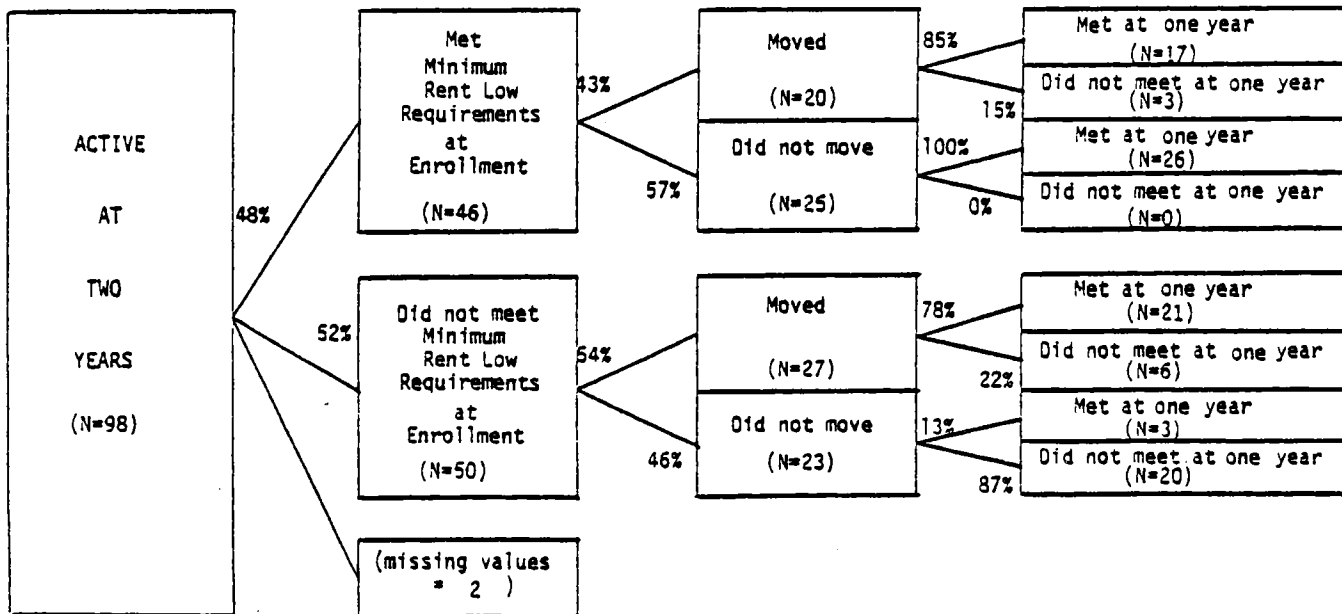
56

Figure 17

THE DYNAMICS OF MEETING
MINIMUM RENT LOW REQUIREMENTS:
CONTROL HOUSEHOLDS,
BETWEEN ENROLLMENT AND ONE YEAR
(Friedman and Weinberg, 1979, Figure IV-14)
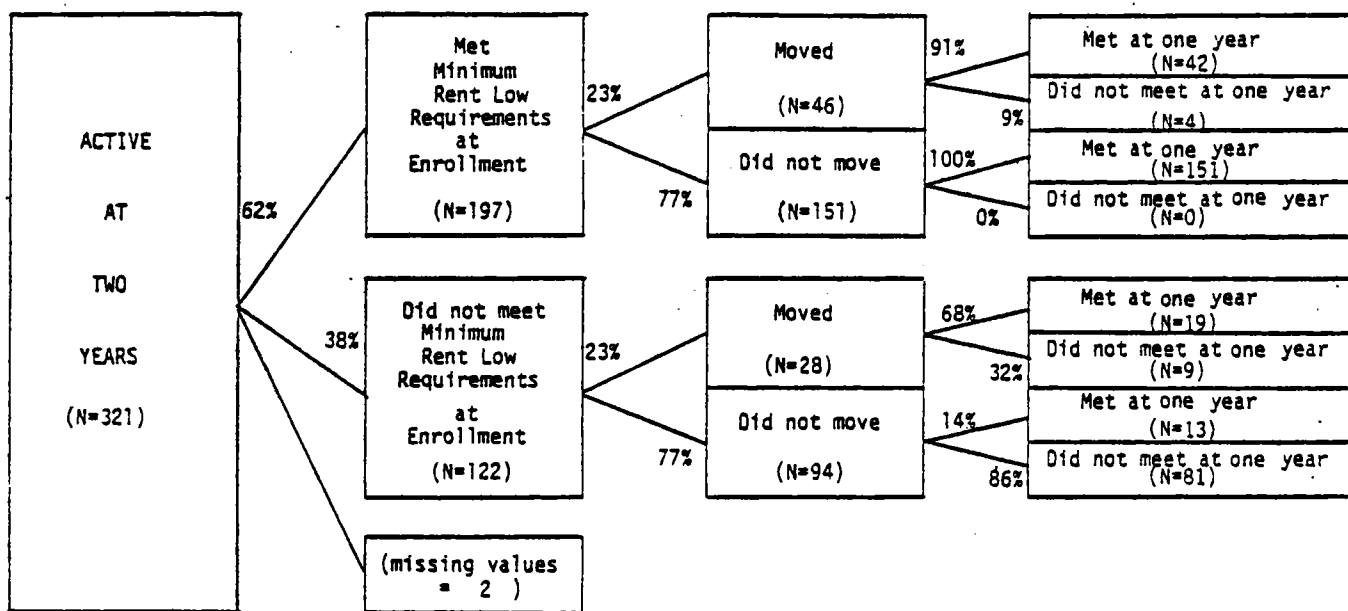
P I T T S B U R G H

P H O E N I X

SAMPLE: Control households active at two years after enrollment, excluding those with
enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.
DATA SOURCES: Initial and monthly Household Report Forms, Baseline and Periodic Interviews, and
payments file.
NOTE: The number of enrollees that dropped out at two years was 113 in Pittsburgh and 243 in Phoenix.

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Figure 18

THE DYNAMICS OF MEETING
MINIMUM RENT LOW REQUIREMENTS:
UNCONSTRAINED HOUSEHOLDS,
BETWEEN ENROLLMENT AND ONE YEAR
(Friedman and Weinberg, 1979, Figure IV-15)

SAMPLE: Unconstrained households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.
DATA SOURCES: Initial and monthly Household Report Forms, Baseline and Periodic Interviews, and payments file.
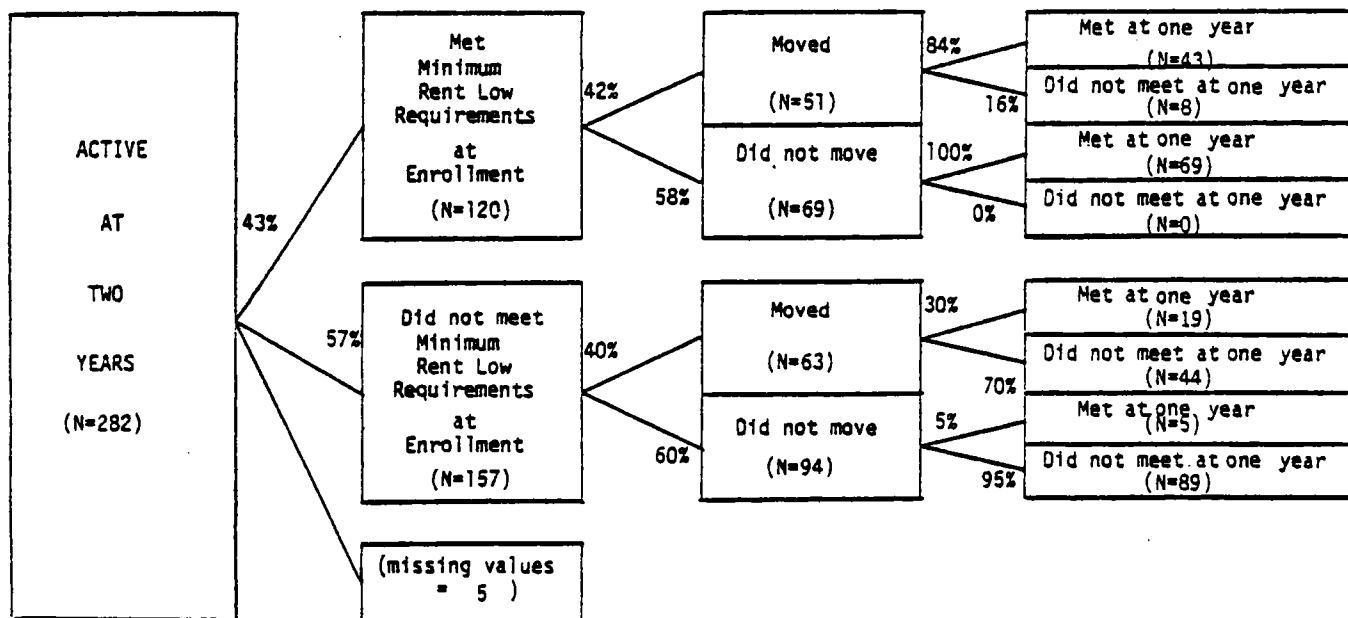NOTE: The number of enrollees that dropped out at two years was 12 in Pittsburgh and 30 in Phoenix.

Figure 19

THE DYNAMICS OF MEETING
MINIMUM RENT HIGH REQUIREMENTS:
MINIMUM RENT HIGH HOUSEHOLDS,
BETWEEN ENROLLMENT AND ONE YEAR
(Friedman and Weinberg, 1979, Figure IV-16)

P I T T S B U R G H

P H O E N I X
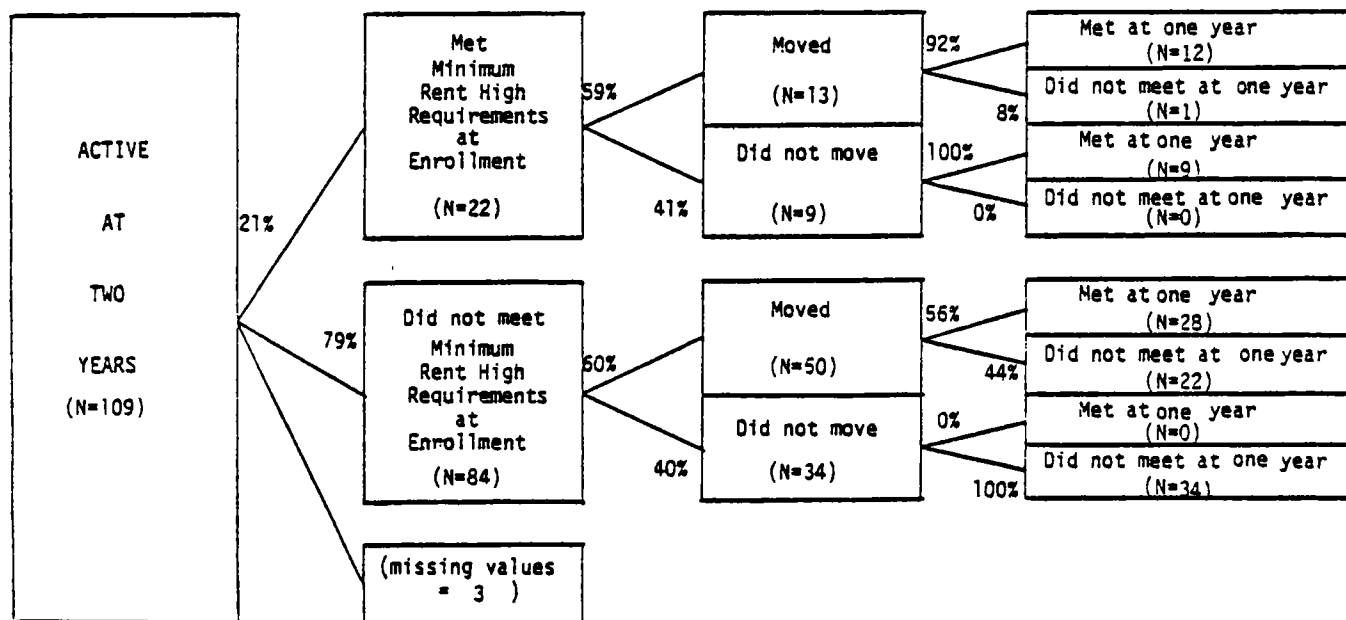
SAMPLE: Minimum Rent High households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.
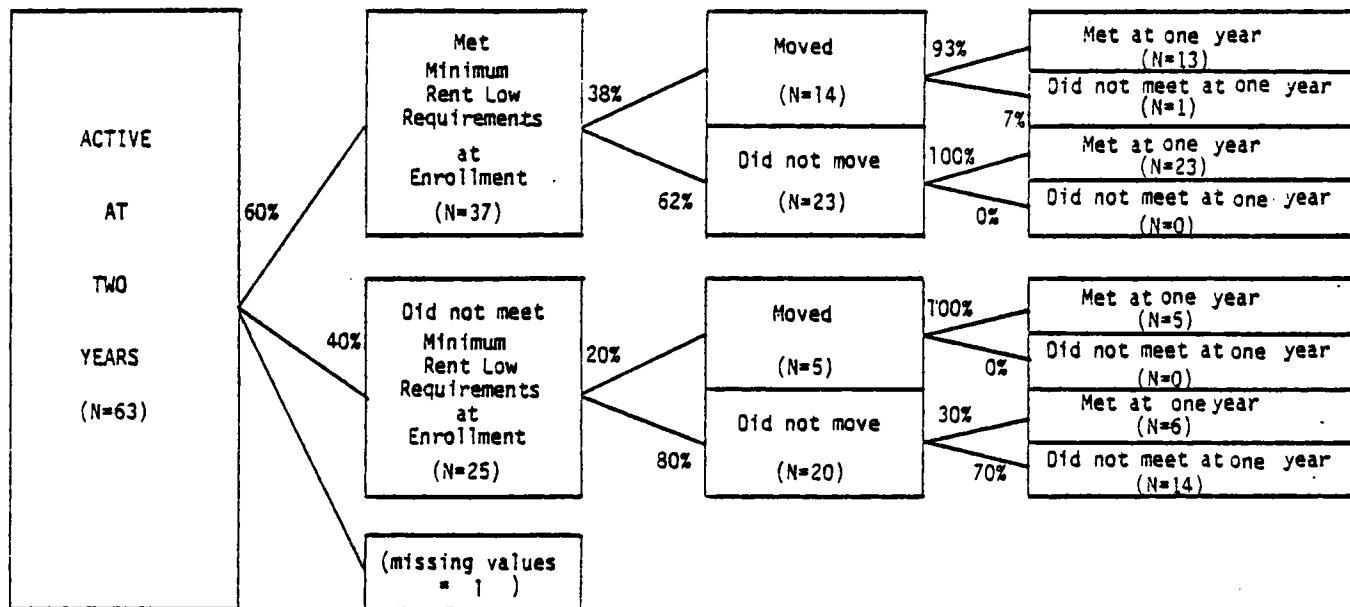DATA SOURCES: Initial and monthly Household Report Forms, Baseline and Periodic Interviews, and payments file.
NOTE: The number of enrollees that dropped out at two years was 62 in Pittsburgh and 82 in Phoenix.

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Figure 20

THE DYNAMICS OF MEETING
MINIMUM RENT HIGH REQUIREMENTS:
CONTROL HOUSEHOLDS,
BETWEEN ENROLLMENT AND ONE YEAR
(Friedman and Weinberg, 1979, Figure IV-17)

P I T T S B U R G H

P H O E N I X

SAMPLE: Control households active at two years after enrollment, excluding those with
enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.
DATA SOURCES: Initial and monthly Household Report Forms, Baseline and Periodic Interviews, and
payments file.
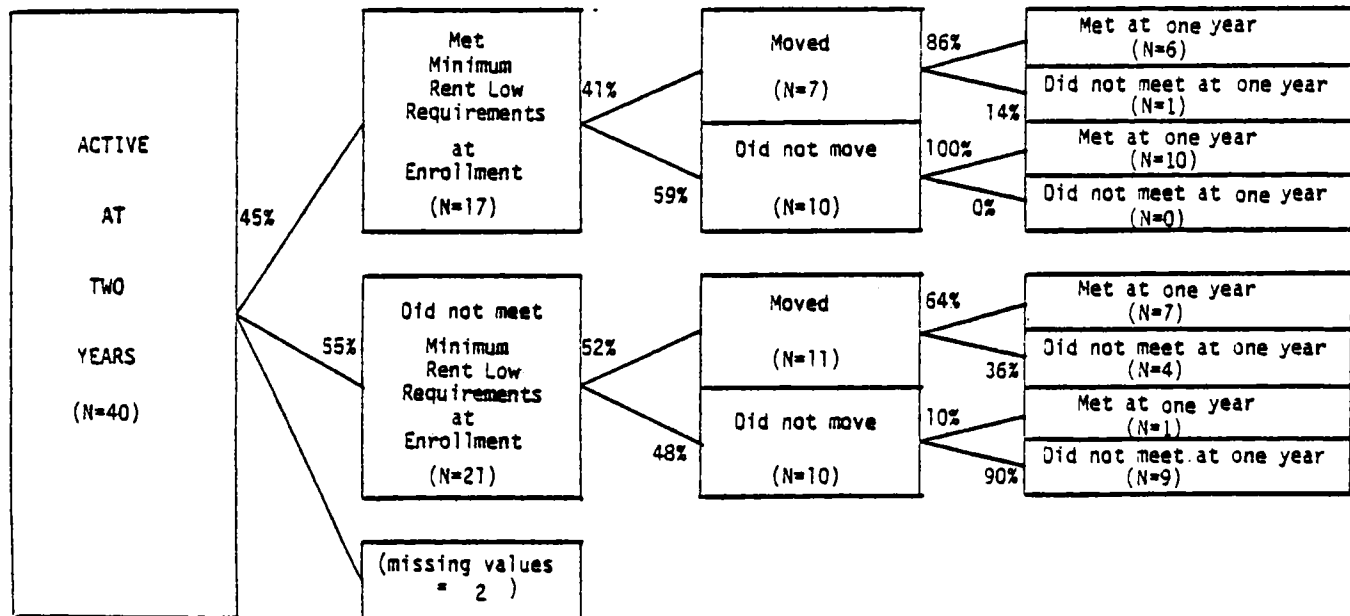NOTE: The number of enrollees that dropped out at two years was 113 in Pittsburgh and 243 in Phoenix.

Figure 21

THE DYNAMICS OF MEETING
MINIMUM RENT HIGH REQUIREMENTS:
UNCONSTRAINED HOUSEHOLDS,
BETWEEN ENROLLMENT AND ONE YEAR
(Friedman and Weinberg, 1979, Figure IV-18)

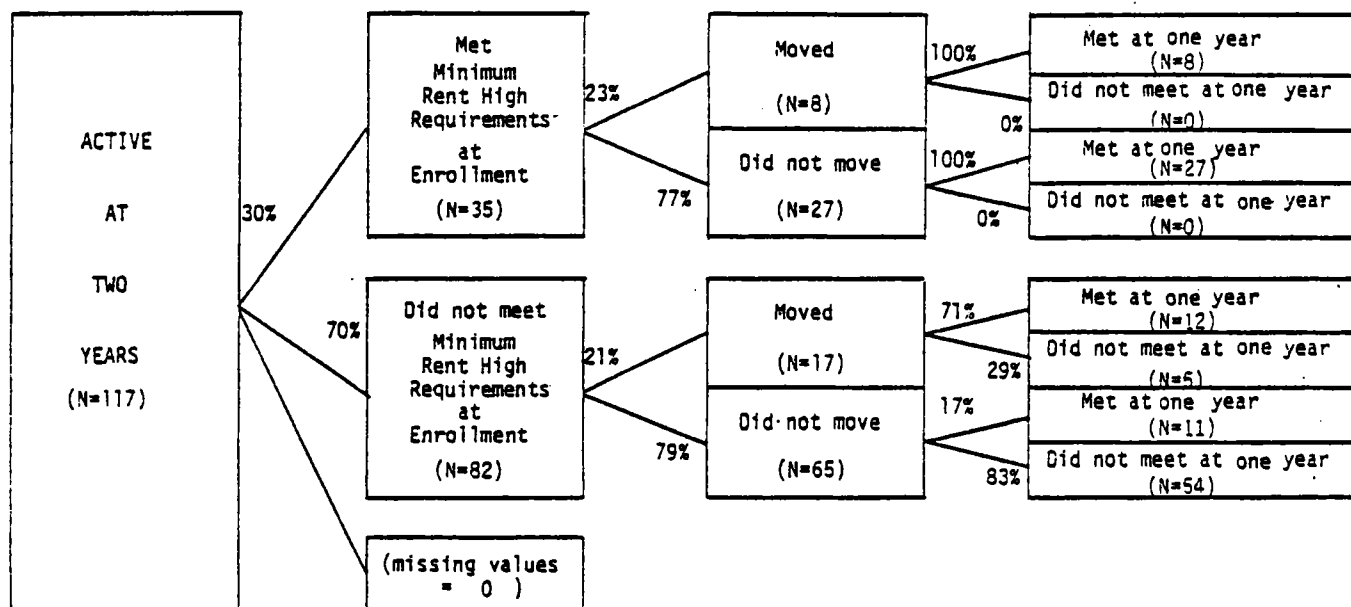P I T T S B U R G H

P H O E N I X

SAMPLE: Unconstrained households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.
DATA SOURCES: Initial and monthly Household Report Forms, Baseline and Periodic Interviews, and payments file.
NOTE: The number of enrollees that dropped out at two years was 12 in Pittsburgh and 30 in Phoenix.

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Figure 22

THE DYNAMICS OF MEETING
MINIMUM STANDARDS REQUIREMENTS:
MINIMUM STANDARDS HOUSEHOLDS,
BETWEEN ONE YEAR AND TWO YEARS
(Friedman and Weinberg, 1979, Figure IV-19)

P I T T S B U R G H

ACTIVE AT TWO YEARS (N=204)

41% → Met Minimum Standards Requirements at One Year (N=81)
 - 15% → Moved (N=12)
   - 58% → Met at two years (N=7)
   - 42% → Did not meet at two years (N=5)
 - 85% → Did not move (N=69)
   - 100% → Met at two years (N=69)
   - 0% → Did not meet at two years (N=0)

59% → Did not meet Minimum Standards Requirements at One Year (N=117)
 - 24% → Moved (N=28)
   - 36% → Met at two years (N=10)
   - 64% → Did not meet at two years (N=18)
 - 76% → Did not move (N=89)
   - 3% → Met at two years (N=3)
   - 97% → Did not meet at two years (N=86)

(missing values = 6)

P H O E N I X

ACTIVE AT TWO YEARS (N=174)

51% → Met Minimum Standards Requirements at One Year (N=84)
 - 39% → Moved (N=33)
   - 67% → Met at two years (N=22)
   - 33% → Did not meet at two years (N=11)
 - 61% → Did not move (N=51)
   - 100% → Met at two years (N=51)
   - 0% → Did not meet at two years (N=0)

49% → Did not meet Minimum Standards Requirements at One Year (N=82)
 - 35% → Moved (N=29)
   - 55% → Met at two years (N=16)
   - 45% → Did not meet at two years (N=13)
 - 65% → Did not move (N=53)
   - 9% → Met at two years (N=5)
   - 91% → Did not meet at two years (N=48)
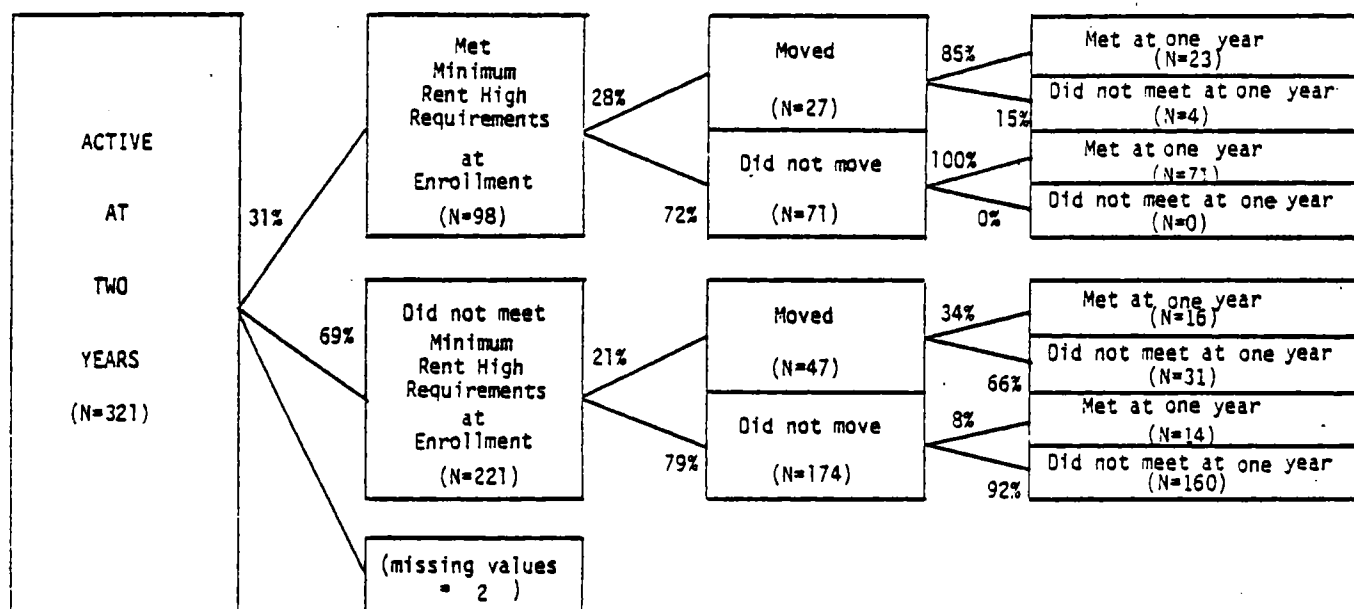
(missing values = 8)

SAMPLE: Minimum Standards households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.
DATA SOURCES: Initial and monthly Household Report Forms, Baseline and Periodic Interviews, and payments file.
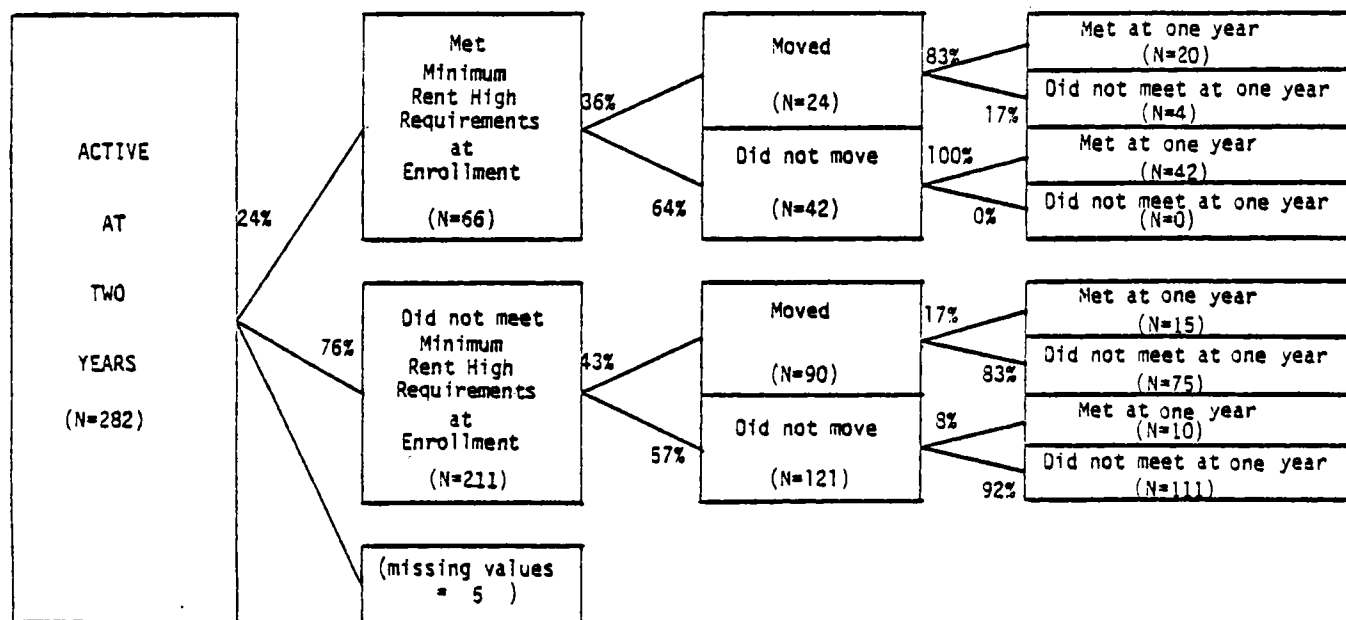NOTE: The number of enrollees that dropped out at two years was 77 in Pittsburgh and 155 in Phoenix.

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Figure 23

THE DYNAMICS OF MEETING
MINIMUM STANDARDS REQUIREMENTS:
CONTROL HOUSEHOLDS,
BETWEEN ONE YEAR AND TWO YEARS
(Friedman and Weinberg, 1979, Figure IV-20)

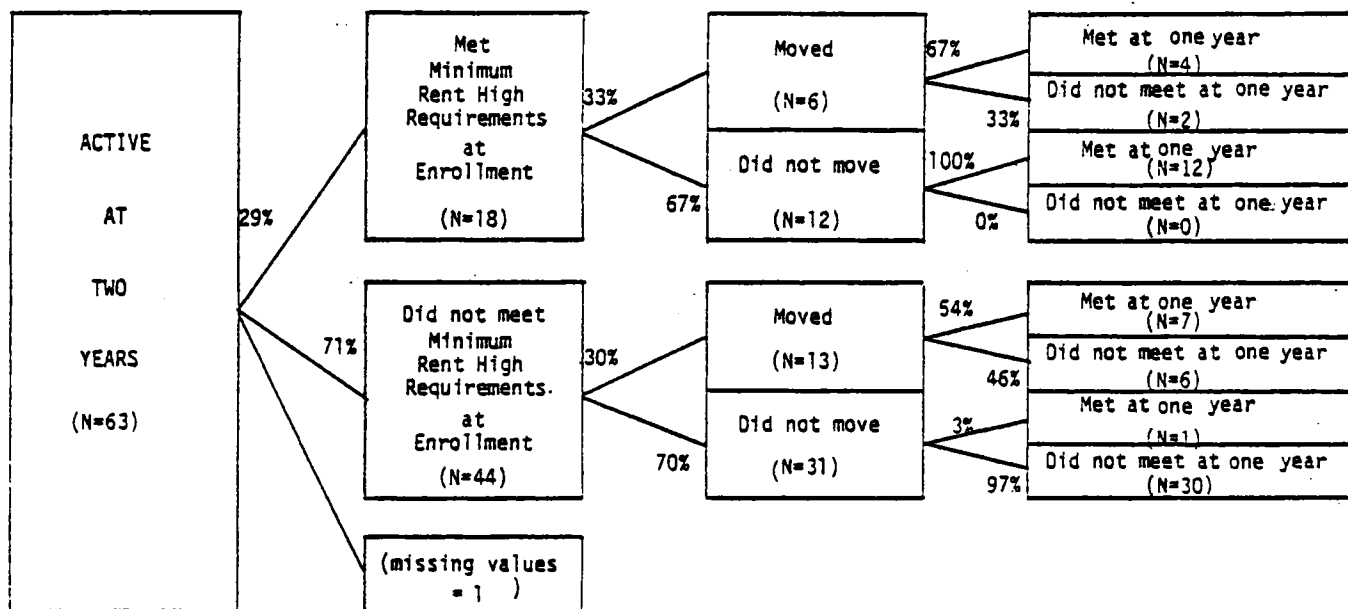P I T T S B U R G H

P H O E N I X

SAMPLE: Control households active at two years after enrollment, excluding those with
enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.
DATA SOURCES: Initial and monthly Household Report Forms, Baseline and Periodic Interviews, and
payments file.
NOTE: The number of enrollees that dropped out at two years was 113 in Pittsburgh and 243 in Phoenix.
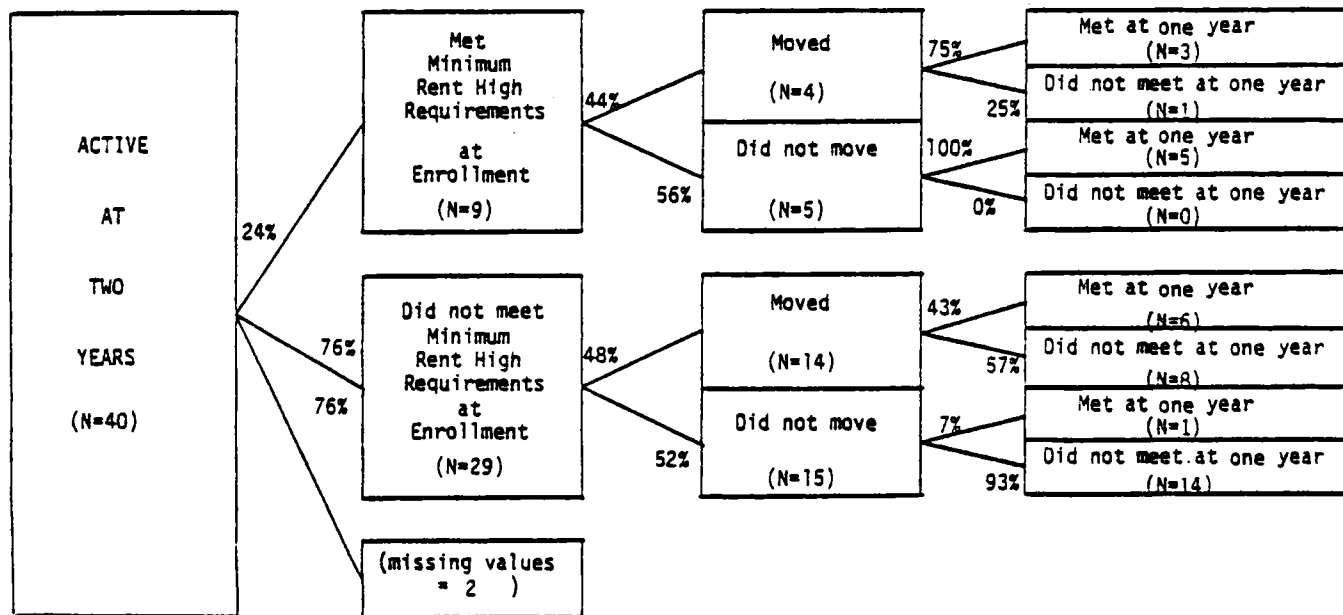
63

Figure 24

THE DYNAMICS OF MEETING
MINIMUM STANDARDS REQUIREMENTS:
UNCONSTRAINED HOUSEHOLDS,
BETWEEN ONE YEAR AND TWO YEARS
(Friedman and Weinberg, 1979, Figure IV-21)

<u>P I T T S B U R G H</u>
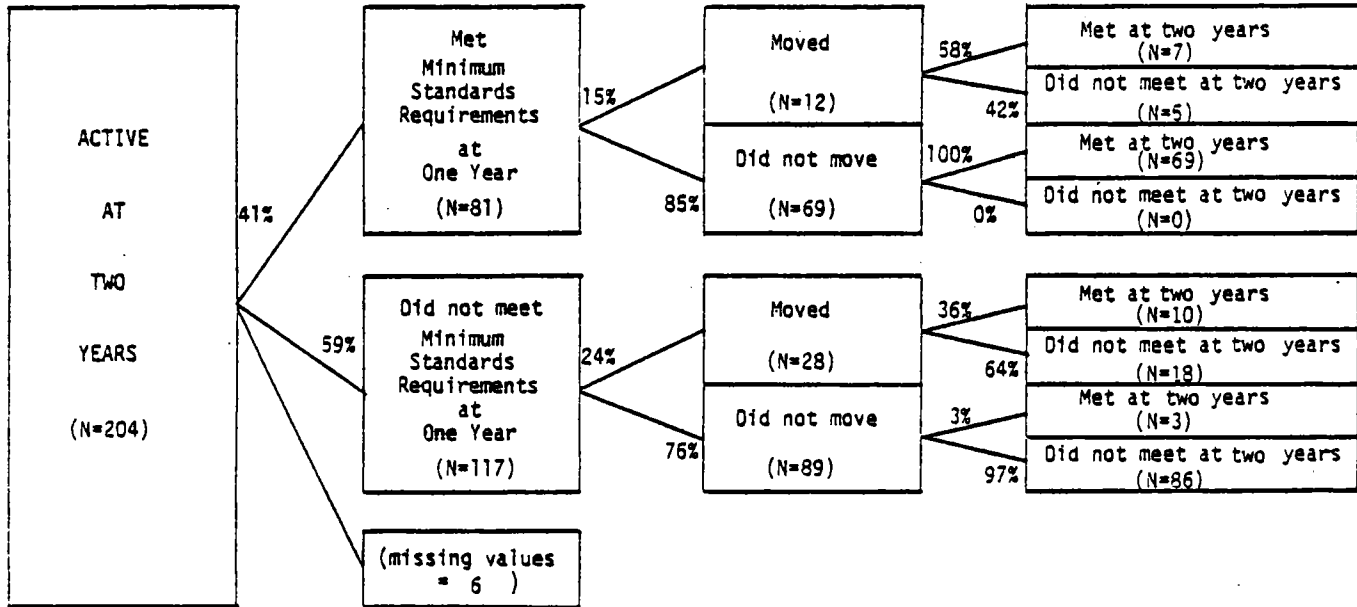

<u>P H O E N I X</u>

SAMPLE: Unconstrained households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.

DATA SOURCES: Initial and monthly Household Report Forms, Baseline and Periodic Interviews, and payments file.

NOTE: The number of enrollees that dropped out at two years was 12 in Pittsburgh and 30 in Phoenix.
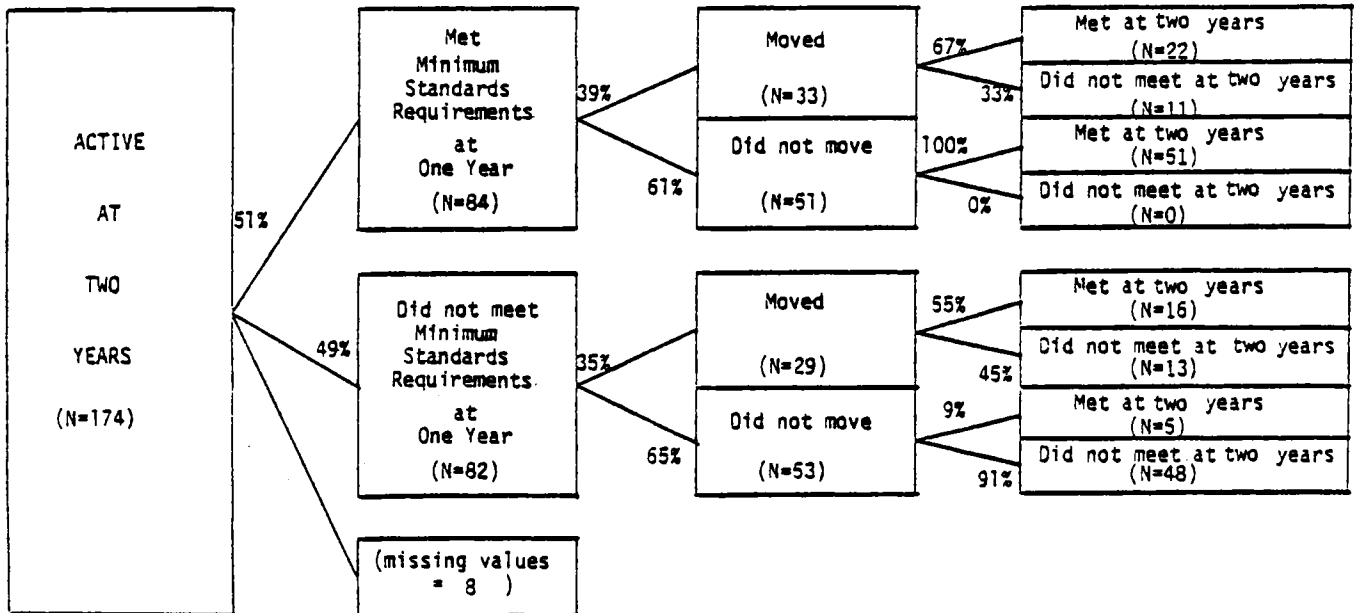
64

Figure 25

THE DYNAMICS OF MEETING
MINIMUM RENT LOW REQUIREMENTS:
MINIMUM RENT LOW HOUSEHOLDS,
BETWEEN ONE YEAR AND TWO YEARS
(Friedman and Weinberg, 1979, Figure IV-22)

P I T T S B U R G H

ACTIVE AT TWO YEARS (N=128)

81% → Met Minimum Rent Low Requirements at One Year (N=102)

20% → Moved (N=20)
100% → Met at two years (N=20)
0% → Did not meet at two years (N=0)

80% → Did not move (N=82)
100% → Met at two years (N=82)
0% → Did not meet at two years (N=0)

19% → Did not meet Minimum Rent Low Requirements at One Year (N=24)

17% → Moved (N=4)
100% → Met at two years (N=4)
0% → Did not meet at two years (N=0)

83% → Did not move (N=20)
5% → Met at two years (N=1)
95% → Did not meet at two years (N=19)

(missing values = 2)

P H O E N I X

ACTIVE AT TWO YEARS (N=98)

70% → Met Minimum Rent Low Requirements at One Year (N=67)

42% → Moved (N=28)
93% → Met at two years (N=26)
7% → Did not meet at two years (N=2)

58% → Did not move (N=39)
100% → Met at two years (N=39)
0% → Did not meet at two years (N=0)

30% → Did not meet Minimum Rent Low Requirements at One Year (N=29)

41% → Moved (N=12)
58% → Met at two years (N=7)
42% → Did not meet at two years (N=5)

59% → Did not move (N=17)
12% → Met at two years (N=2)
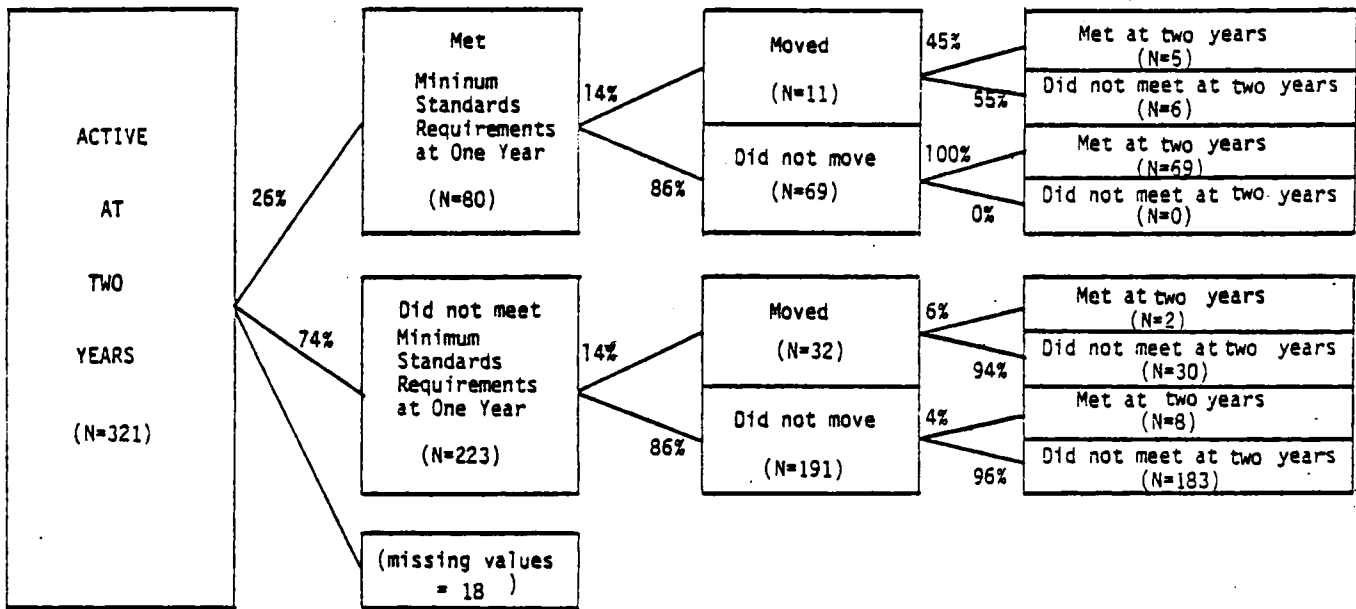88% → Did not meet at two years (N=15)

(missing values = 2)

SAMPLE: Minimum Rent Low households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.
DATA SOURCES: Initial and monthly Household Report Forms, Baseline and Periodic Interviews, and payments file.
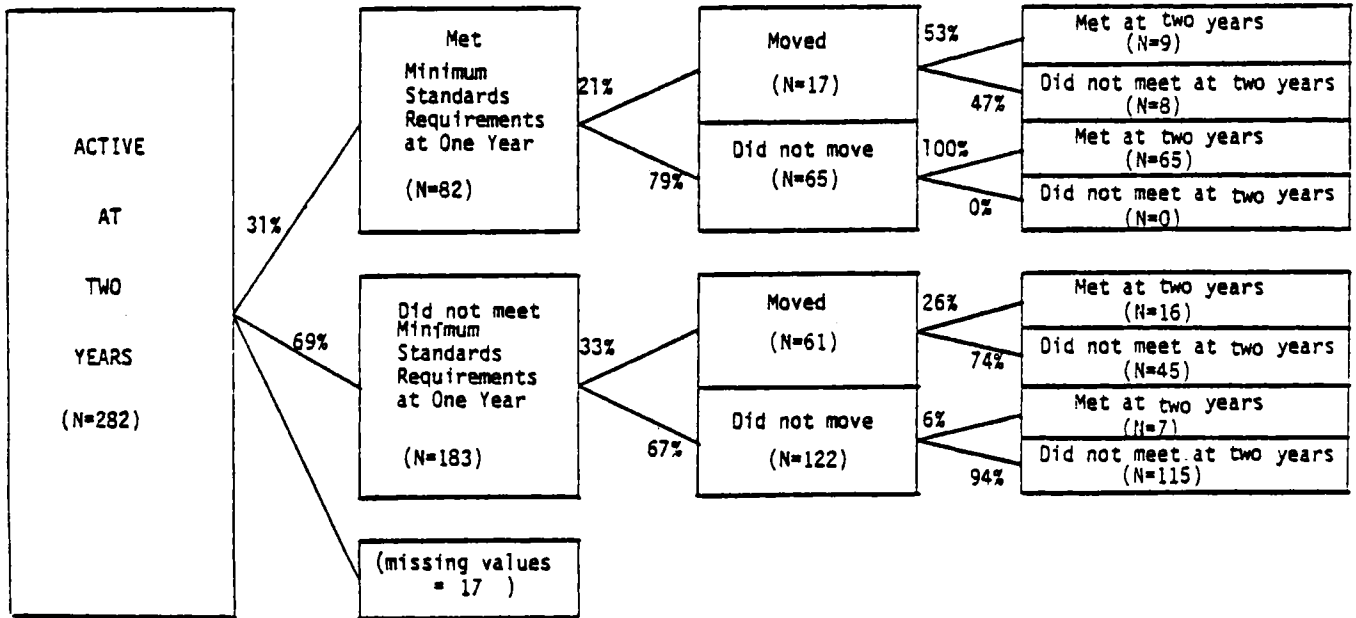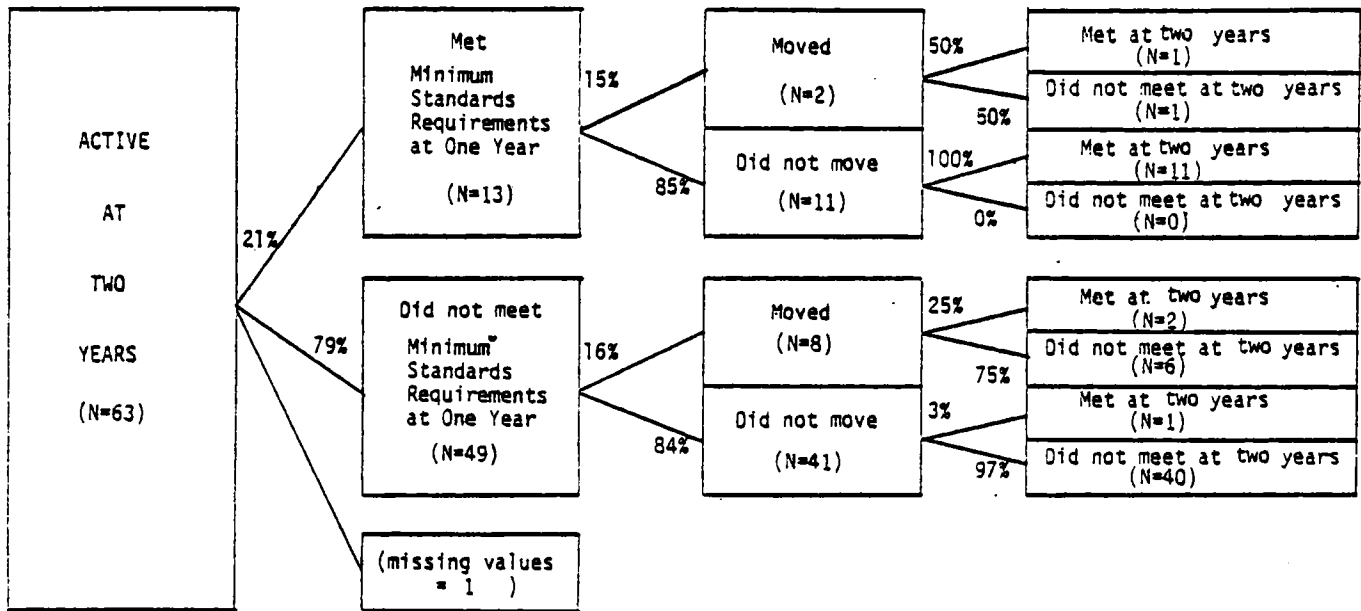NOTE: The number of enrollees that dropped out at two years was 38 in Pittsburgh and 77 in Phoenix.

65

Figure 26

THE DYNAMICS OF MEETING
MINIMUM RENT LOW REQUIREMENTS:
CONTROL HOUSEHOLDS,
BETWEEN ONE YEAR AND TWO YEARS
(Friedman and Weinberg, 1979, Figure IV-23)

P I T T S B U R G H

ACTIVE AT TWO YEARS (N=321)

71% → Met Minimum Rent Low Requirements at One Year (N=225)
- 15% → Moved (N=34)
  - 88% → Met at two years (N=30)
  - 12% → Did not meet at two years (N=4)
- 85% → Did not move (N=191)
  - 100% → Met at two years (N=191)
  - 0% → Did not meet at two years (N=0)

29% → Did not meet Minimum Rent Low Requirements at One Year (N=94)
- 17% → Moved (N=16)
  - 69% → Met at two years (N=11)
  - 31% → Did not meet at two years (N=5)
- 83% → Did not move (N=78)
  - 8% → Met at two years (N=6)
  - 92% → Did not meet at two years (N=72)

(missing values = 2)

P H O E N I X

ACTIVE AT TWO YEARS (N=282)

49% → Met Minimum Rent Low Requirements at One Year (N=135)
- 36% → Moved (N=49)
  - 78% → Met at two years (N=38)
  - 22% → Did not meet at two years (N=11)
- 64% → Did not move (N=86)
  - 100% → Met at two years (N=86)
  - 0% → Did not meet at two years (N=0)

51% → Did not meet Minimum Rent Low Requirements at One Year (N=139)
- 26% → Moved (N=36)
  - 25% → Met at two years (N=9)
  - 75% → Did not meet at two years (N=27)
- 74% → Did not move (N=103)
  - 6% → Met at two years (N=6)
  - 94% → Did not meet at two years (N=97)

(missing values = 8)

SAMPLE: Minimum Rent Low households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.
DATA SOURCES: Initial and monthly Household Report Forms, Baseline and Periodic Interviews, and payments file.
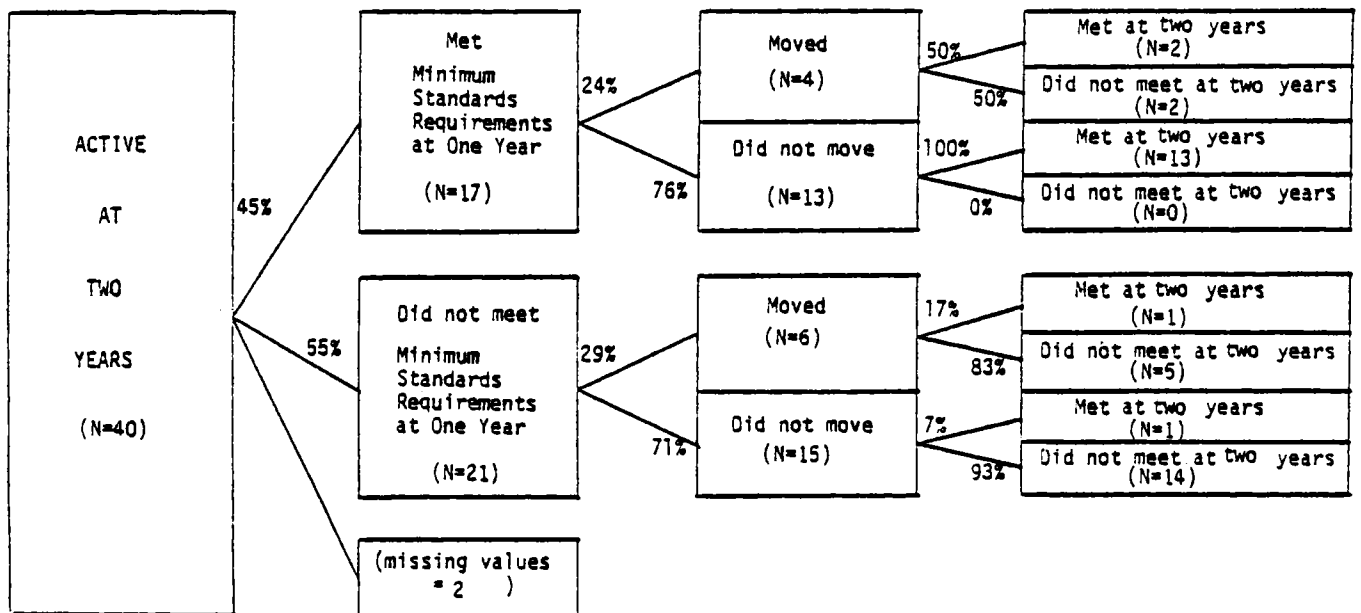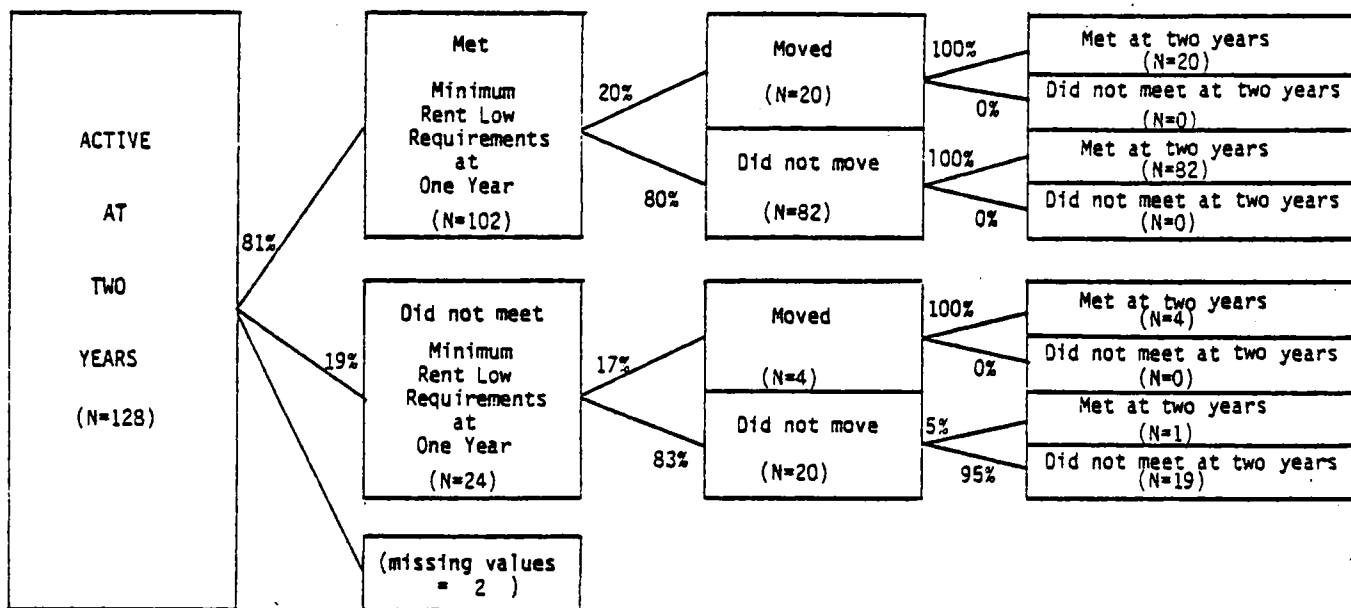NOTE: The number of enrollees that dropped out at two years was 113 in Pittsburgh and 243 in Phoenix.

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Figure 27

THE DYNAMICS OF MEETING
MINIMUM RENT LOW REQUIREMENTS:
UNCONSTRAINED HOUSEHOLDS,
BETWEEN ONE YEAR AND TWO YEARS
(Friedman and Weinberg, 1979, Figure IV-24)

P I T T S B U R G H

P H O E N I X

SAMPLE: Unconstrained households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.
DATA SOURCES: Initial and monthly Household Report Forms, Baseline and Periodic Interviews, and payments file.
NOTE: The number of enrollees that dropped out at two years was 12 in Pittsburgh and 30 in Phoenix.
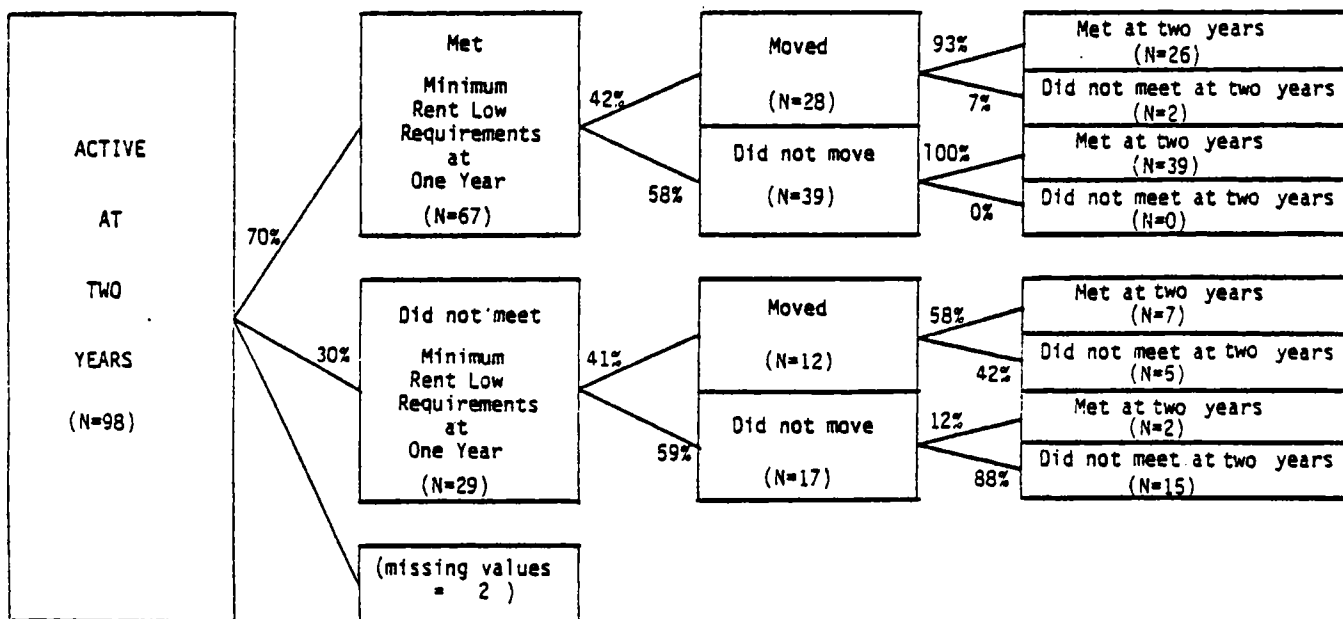
Figure 28

THE DYNAMICS OF MEETING
MINIMUM RENT HIGH REQUIREMENTS:
MINIMUM RENT HIGH HOUSEHOLDS,
BETWEEN ONE YEAR AND TWO YEARS
(Friedman and Weinberg, 1979, Figure IV-25)
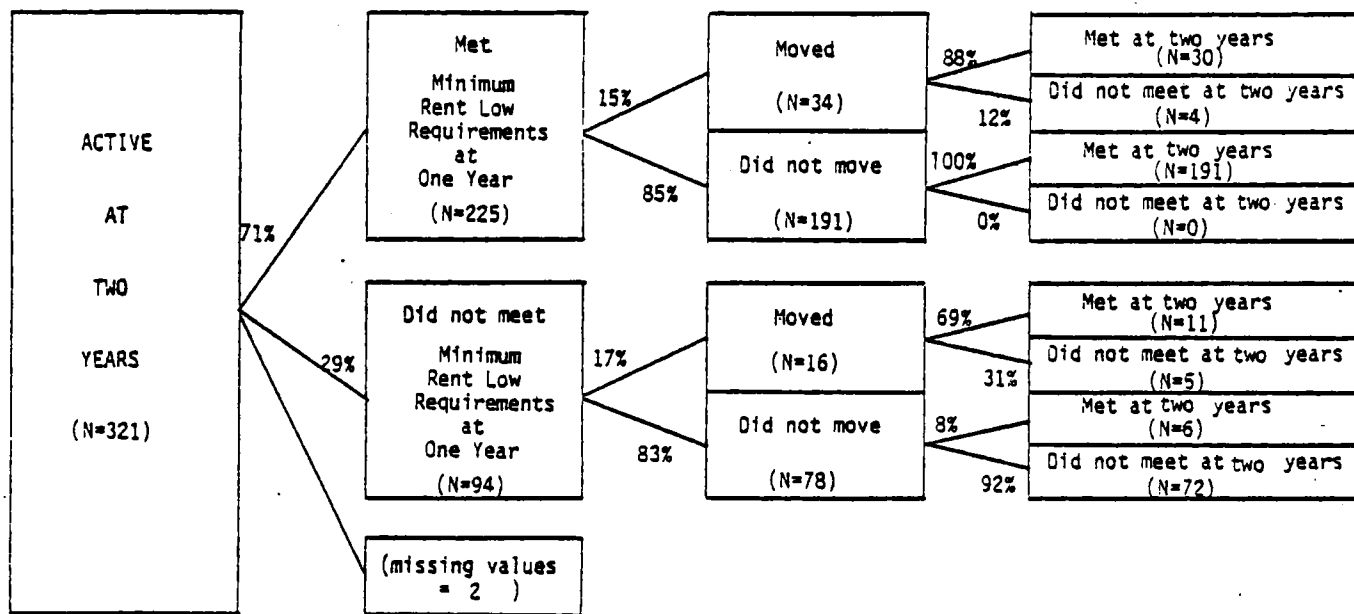
P I T T S B U R G H

P H O E N I X

SAMPLE: Minimum Rent High households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.
DATA SOURCES: Initial and monthly Household Report Forms, Baseline and Periodic Interviews, and payments file.
NOTE: The number of enrollees that dropped out at two years was 62 in Pittsburgh and 82 in Phoenix.
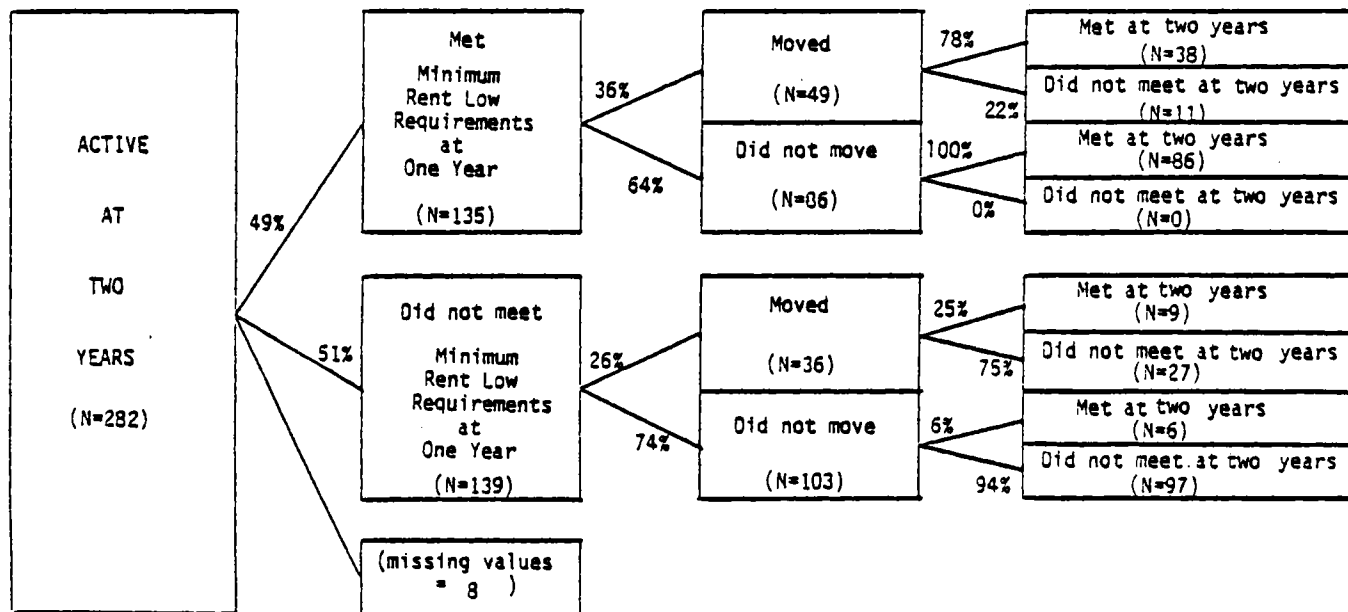
68

Figure 29

THE DYNAMICS OF MEETING
MINIMUM RENT HIGH REQUIREMENTS:
CONTROL HOUSEHOLDS,
BETWEEN ONE YEAR AND TWO YEARS
(Friedman and Weinberg, 1979, Figure IV-26)

PITTSBURGH

ACTIVE AT TWO YEARS (N=321)

39% → Met Minimum Rent High Requirements at One Year (N=124)

- 19% → Moved (N=23)
  - 78% → Met at two years (N=18)
  - 22% → Did not meet at two years (N=5)
- 81% → Did not move (N=101)
  - 100% → Met at two years (N=101)
  - 0% → Did not meet at two years (N=0)

61% → Did not meet Minimum Rent High Requirements at One Year (N=195)

- 14% → Moved (N=27)
  - 37% → Met at two years (N=10)
  - 63% → Did not meet at two years (N=17)
- 86% → Did not move (N=168)
  - 7% → Met at two years (N=7)
  - 93% → Did not meet at two years (N=93)

(missing values = 2)

PHOENIX

ACTIVE AT TWO YEARS (N=282)

32% → Met Minimum Rent High Requirements at One Year (N=86)

- 31% → Moved (N=27)
  - 74% → Met at two years (N=20)
  - 26% → Did not meet at two years (N=7)
- 69% → Did not move (N=59)
  - 100% → Met at two years (N=59)
  - 0% → Did not meet at two years (N=0)

68% → Did not meet Minimum Rent High Requirements at One Year (N=187)

- 31% → Moved (N=58)
  - 16% → Met at two years (N=9)
  - 84% → Did not meet at two years (N=49)
- 69% → Did not move (N=129)
  - 2% → Met at two years (N=2)
  - 98% → Did not meet at two years (N=127)

(missing values = 9)

SAMPLE: Minimum Rent High households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.
DATA SOURCES: Initial and monthly Household Report Forms, Baseline and Periodic Interviews, and payments file.
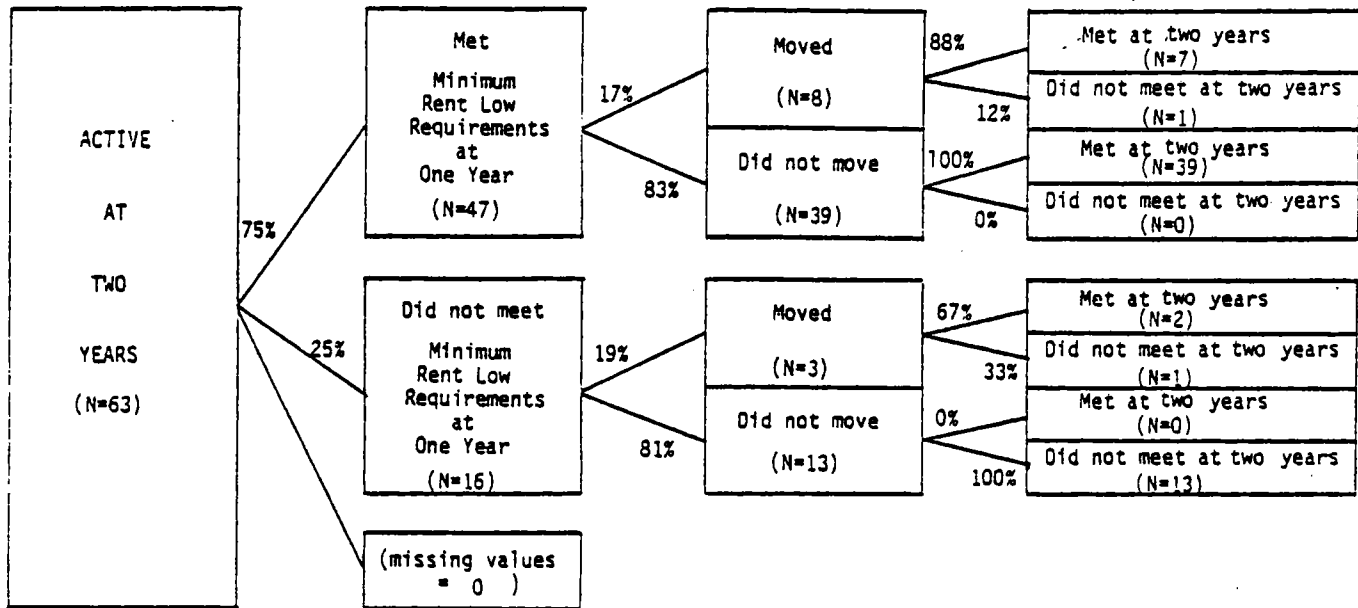NOTE: The number of enrollees that dropped out at two years was 113 in Pittsburgh and 243 in Phoenix.

69

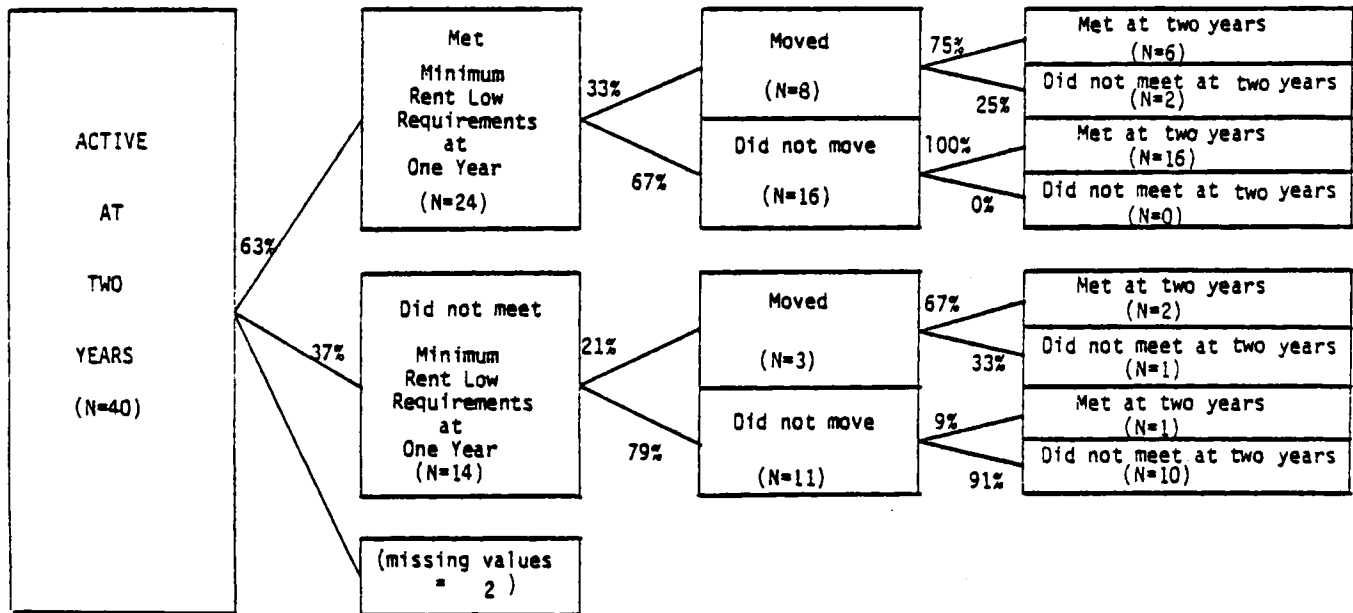## Figure 30

THE DYNAMICS OF MEETING
MINIMUM RENT HIGH REQUIREMENTS:
UNCONSTRAINED HOUSEHOLDS,
BETWEEN ONE YEAR AND TWO YEARS
(Friedman and Weinberg, 1979, Figure IV-27)
P I T T S B U R G H

P H O E N I X
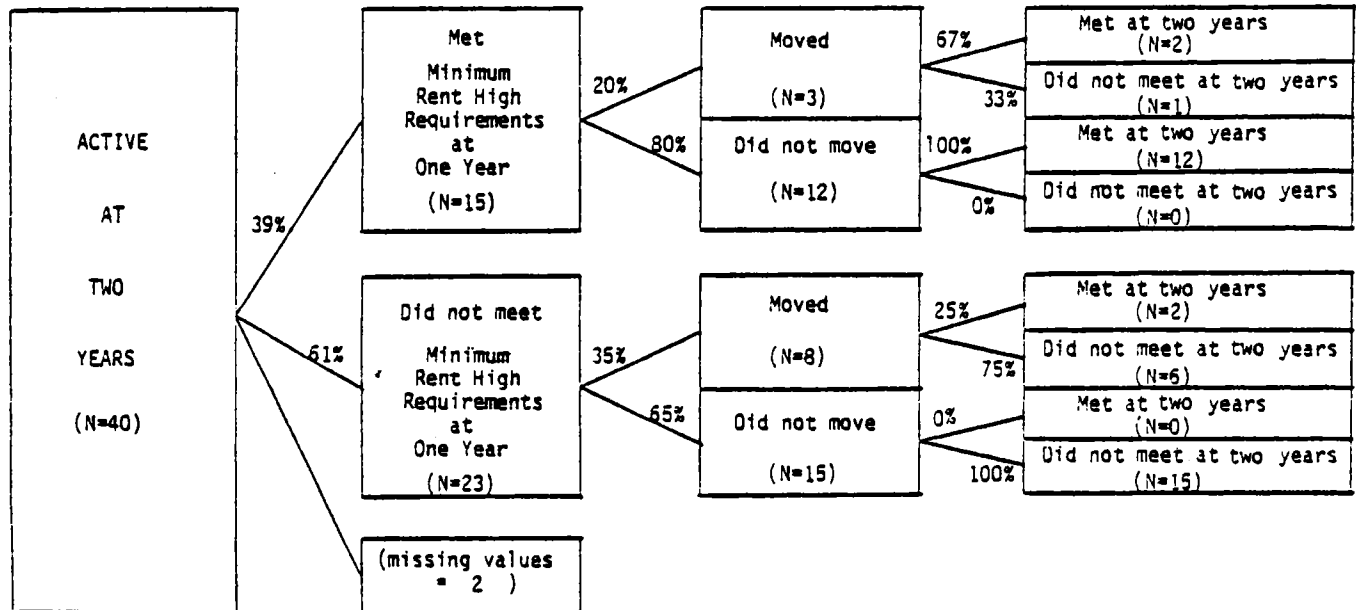
SAMPLE: Unconstrained households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.

DATA SOURCES: Initial and monthly Household Report Forms, Baseline and Periodic Interviews, and payments file.
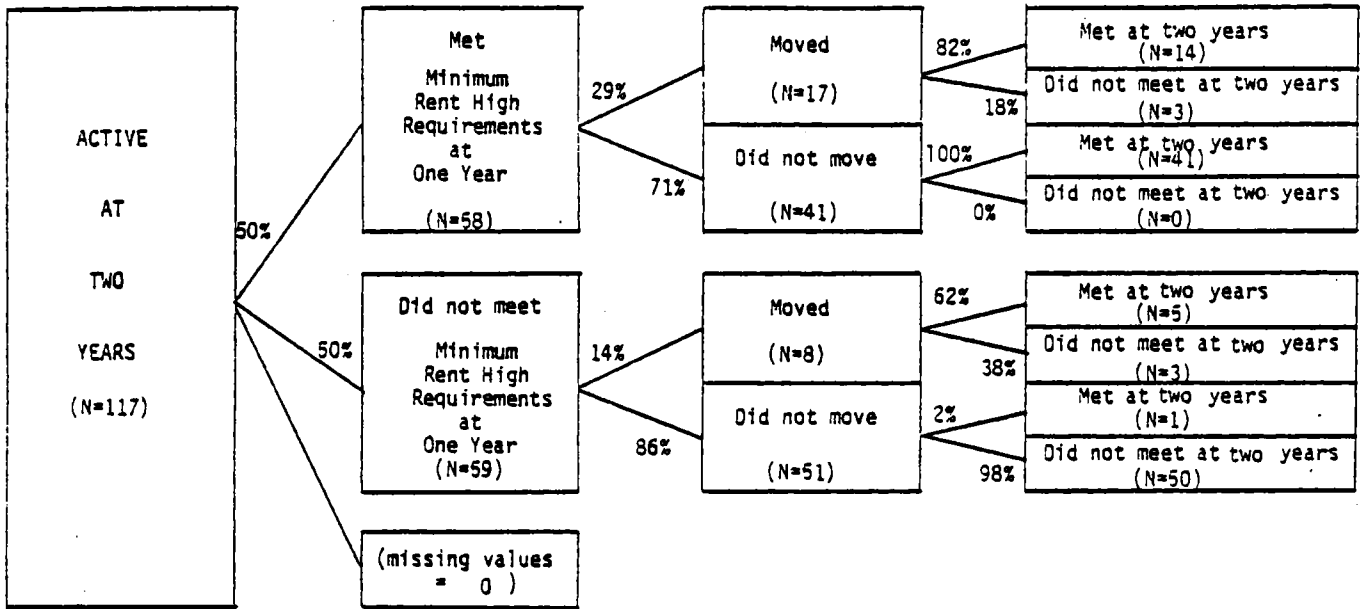
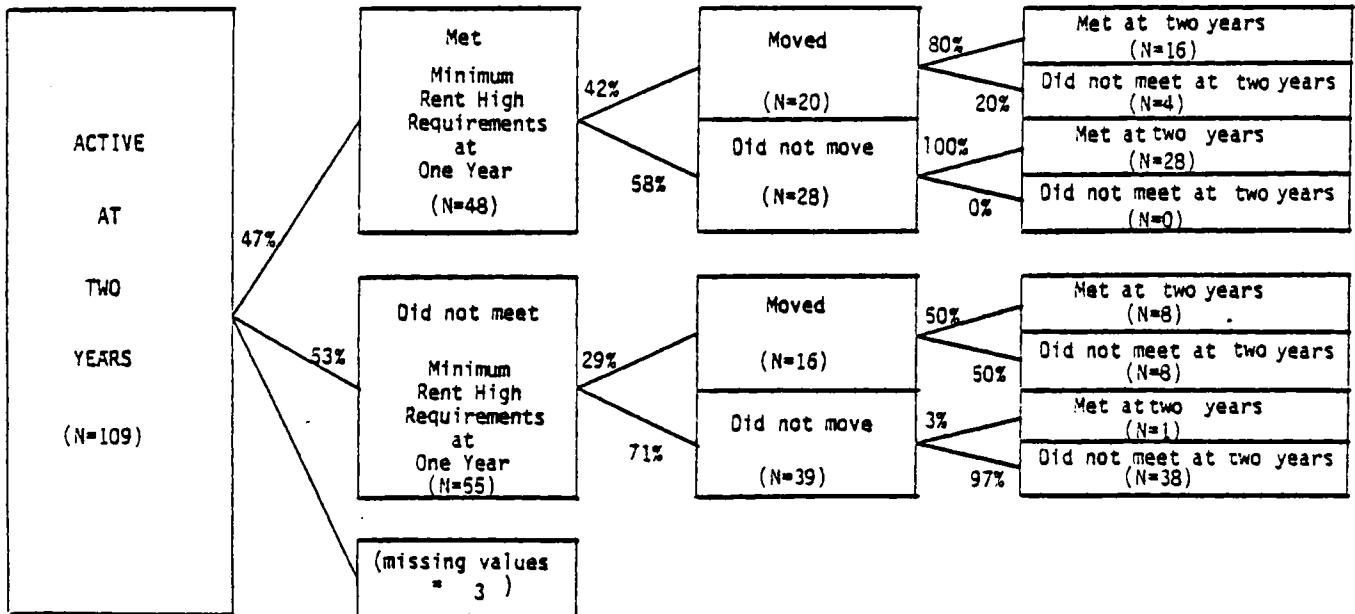NOTE: The number of enrollees that dropped out at two years was 12 in Pittsburgh and 30 in Phoenix.

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6.3   Rent

This section presents mean household rents at enrollment and two years after enrollment. Tables for Percent of Rent and Control households, presented first, are also stratified by mobility. Tables for Housing Gap households are stratified by mobility and, within each table, by whether housing requirements were met. In this and subsequent sections, tables are based on households that were still actively enrolled at the end of two years. In general, there is little evidence of any substantial bias in Experimental/ Control comparisons due to differential acceptance or attrition (see Kennedy and MacMillan, 1979; Friedman and Weinberg, 1978 and 1979).

TABLE 20

CHANGES IN RENT FROM ENROLLMENT TO TWO YEARS AFTER ENROLLMENT
(Friedman and Weinberg, 1978, Table X-1)

| TREATMENT GROUP | MEAN RENT | | MEAN CHANGE IN RENT | | | SAMPLE SIZE |
| | At Enroll-Ment | At Two Years | AMOUNT | PERCENTAGE | | |
				Mean of Ratio	Ratio of Means	
			PITTSBURGH			
All Percent of Rent Households	$114	$139	$25	26%	22%	(385)
Percentage rebate:						
20%	109	126	17	17	16	(62)
30%	112	136	25	25	22	(82)
40%	122	148	26	27	21	(108)
50%	114	140	27	27	24	(105)
60%	109	142	33	39	30	(28)
Control households	115	133	18	18	16	(289)
Unconstrained households	107	128	21	22	20	(59)
			PHOENIX			
All Percent of Rent households	132	162	30	26	23	(280)
Percentage rebate:						
20%	133	156	23	24	17	(44)
30%	125	152	27	24	22	(79)
40%	136	166	30	24	22	(59)
50%	141	172	31	24	22	(77)
60%	112	157	45	45	40	(21)
Control households	128	145	17	18	13	(252)
Unconstrained households	135	165	30	35	22	(37)

SAMPLE: Percent of Rent, Control, and Unconstrained households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.
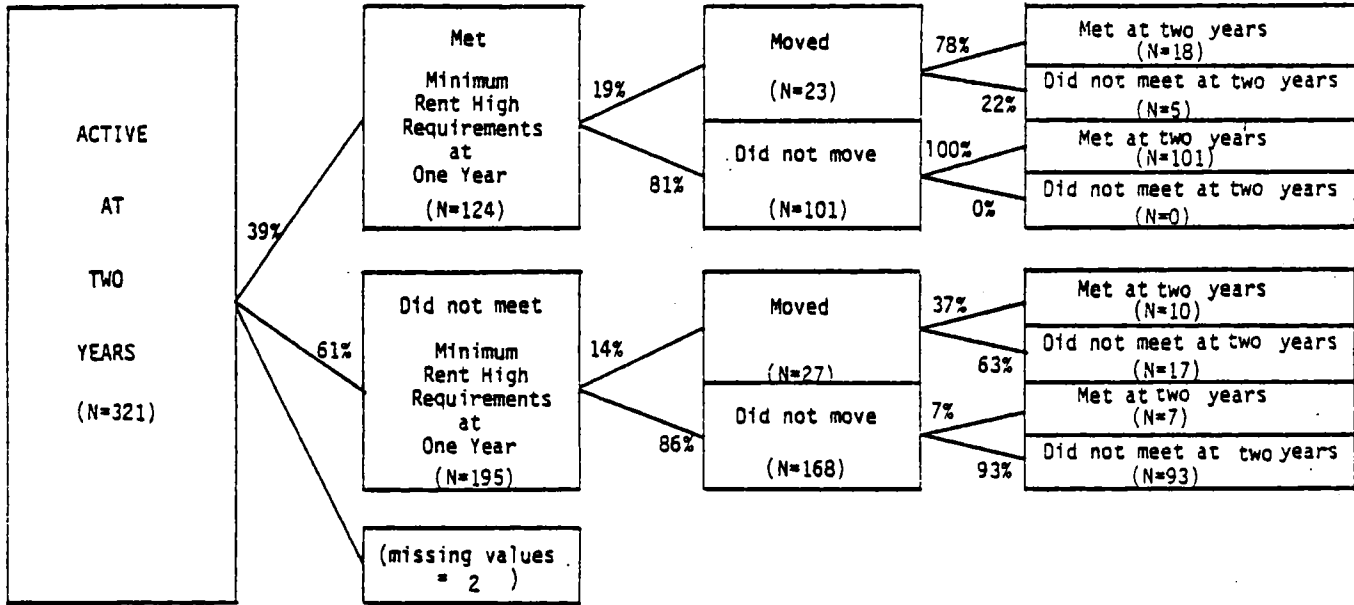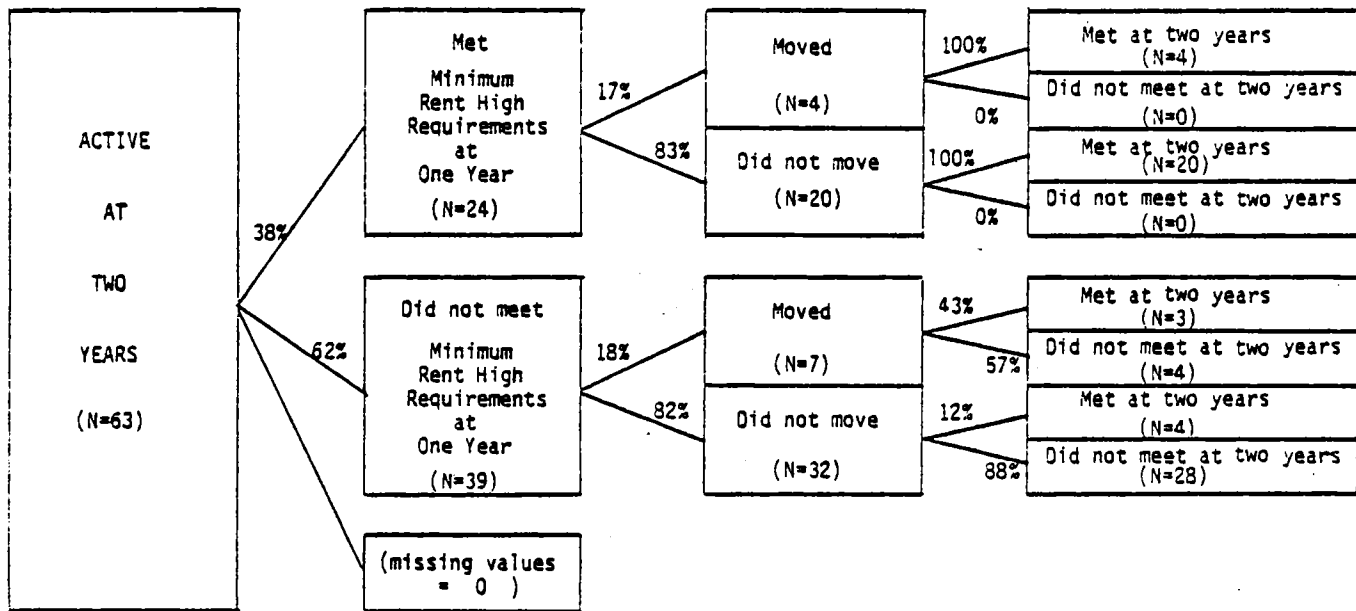
DATA SOURCES: Initial and monthly Household Report Forms, and payments file.

TABLE 21

CHANGES IN RENT FROM ENROLLMENT TO TWO YEARS
AFTER ENROLLMENT FOR THE MOVER SAMPLE
(Friedman and Weinberg, 1978, Table X-5)

| | MEAN RENT | | MEAN CHANGE IN RENT | | | |
| | | | | PERCENTAGE | | |
TREATMENT GROUP	At Enroll- ment	At two years	AMOUNT	Mean of Ratio	Ratio of Means	SAMPLE SIZE
			PITTSBURGH			
All Percent of Rent households	$114	$156	$41	45%	36%	(142)
Percentage rebate:						
20%	110	135	25	27	23	(17)
30%	107	150	43	44	40	(33)
40%	128	167	39	43	30	(46)
50%	111	157	45	49	41	(35)
60%	[98]	[154]	[56]	[74]	[57]	(11)
Control households	120	147	26	29	22	(94)
Unconstrained households	109	145	36	39	33	(22)
			PHOENIX			
All Percent of Rent households	135	179	44	38	33	(169)
Percentage rebate:						
20%	122	158	36	37	30	(26)
30%	137	181	44	37	32	(40)
40%	142	191	50	40	35	(33)
50%	143	184	41	32	29	(54)
60%	114	170	56	57	49	(16)
Control households	132	160	28	30	21	(123)
Unconstrained households	128	175	48	55	38	(21)

SAMPLE: Percent of Rent, Control, and Unconstrained movers active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.

DATA SOURCES: Initial and monthly Household Report Forms, and payments file.

NOTE: Brackets indicate entries based on 15 or fewer observations.

TABLE 22

CHANGE IN RENT APPLYING SELECTIVE
INCOME ELIGIBILITY LIMITS TO CONTROL HOUSEHOLDS
(Friedman and Weinberg, 1978, Table X-7)

| | MEAN RENT | | MEAN CHANGE IN RENT | | | |
| | | | | PERCENTAGE | | |
TREATMENT GROUP	At Enroll-ment	At Two Years	AMOUNT	Mean of Ratio	Ratio of Means	SAMPLE SIZE
PITTSBURGH						
Percentage rebate = 20%	$105	$120	$16	16%	15%	(39)
Control households	119	139	20	19	17	(179)
Percentage rebate = 60%	108	136	28	32	26	(23)
Control households	107	123	16	18	15	(111)
PHOENIX						
Percentage rebate = 20%	146	166	20	19	14	(30)
Control households	140	156	17	15	12	(166)
Percentage rebate = 60%	117	155	38	36	32	(17)
Control households	106	120	15	21	14	(88)

SAMPLE: Percent of Rent households in Treatment Groups 13 and 23 and Control households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.

DATA SOURCES: Initial and monthly Household Report Forms, and payments file.

NOTE: See Appendix Table III-3 for the income eligibility limits applied to these households.

TABLE 23

CHANGE IN RENT APPLYING SELECTIVE INCOME ELIGIBILITY
LIMITS TO CONTROL HOUSEHOLDS FOR MOVER SAMPLE
(Friedman and Weinberg, 1978, Table X-8)

| | MEAN RENT | | MEAN CHANGE IN RENT | | | |
| | | | | PERCENTAGE | | |
TREATMENT GROUP	At Enroll- ment	At Two Years	AMOUNT	Mean of Ratio	Ratio of Means	SAMPLE SIZE
		PITTSBURGH				
Percentage rebate = 20%	[$100]	[$133]	[$33]	[33%]	[33%]	(7)
Control households	125	155	29	32	23	(47)
Percentage rebate = 60%	[104]	[146]	[43]	[56]	[41]	(9)
Control households	114	138	24	29	21	(48)
		PHOENIX				
Percentage rebate = 20%	[140]	[177]	[37]	[34]	[26]	(15)
Control households	145	171	26	23	18	(77)
Percentage rebate = 60%	[119]	[167]	[48]	[45]	[40]	(13)
Control households	112	135	23	34	21	(49)

SAMPLE: Percent of Rent movers in Treatment Groups 13 and 23 and
Control movers active at two years after enrollment, excluding those with
enrollment incomes over the eligibility limits and those living in their own
homes or in subsidized housing.

DATA SOURCES: Initial and monthly Household Report Forms, and pay-
ments file.

NOTE: Brackets indicate entries based on 15 or fewer observations.
See Appendix Table III-3 for the income eligibility requirements applied to
these households.

Table 24

CHANGES IN HOUSING EXPENDITURES FROM ENROLLMENT TO TWO YEARS AFTER ENROLLMENT
BY TREATMENT TYPE (MINIMUM STANDARDS REQUIREMENTS): ALL HOUSEHOLDS

(Friedman and Weinberg, 1979, Table V-1)

HOUSEHOLD GROUP	HOUSING EXPENDITURES		CHANGE IN EXPENDITURES			SAMPLE SIZE
	AT ENROLL-MENT	AT TWO YEARS	AMOUNT	PERCENTAGE MEAN OF RATIO	PERCENTAGE RATIO OF MEANS	
PITTSBURGH						
ALL HOUSEHOLDS						
Minimum Standards households	$109	$129	$21	0.22	0.19	(193)
Control households	115	134	18	0.18	0.16	(302)
Unconstrained households	107	128	21	0.22	0.20	(59)
HOUSEHOLDS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Standards households	119	142	23	0.24	0.19	(87)
Control households	132	154	22	0.17	0.17	(83)
Unconstrained households	[121]	[133]	[12]	[0.11]	[0.10]	(14)
Did Not Meet at Enrollment						
Minimum Standards households	114	142	28	0.31	0.25	(49)
Control households	127	155	27	0.23	0.21	(29)
Unconstrained households	[100]	[121]	[21]	[0.20]	[0.21]	(6)
Met at Enrollment						
Minimum Standards households	125	140	16	0.16	0.13	(38)
Control households	135	154	19	0.14	0.14	(54)
Unconstrained households	[137]	[142]	[5]	[0.04]	[0.04]	(8)
HOUSEHOLDS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Standards households	101	120	19	0.21	0.19	(106)
Control households	109	126	17	0.19	0.16	(219)
Unconstrained households	103	127	24	0.26	0.23	(45)
Did Not Meet at Enrollment						
Minimum Standards households	100	119	19	0.21	0.19	(102)
Control households	108	125	17	0.18	0.16	(210)
Unconstrained households	103	127	24	0.26	0.23	(45)
Met at Enrollment						
Minimum Standards households	[129]	[144]	[15]	[0.13]	[0.21]	(4)
Control households	[149]	[157]	[8]	[0.20]	[0.05]	(8)
Unconstrained households	--	--	--	--	--	(0)
PHOENIX						
ALL HOUSEHOLDS						
Minimum Standards households	$124	$151	$25	0.26	0.20	(163)
Control households	129	145	16	0.18	0.12	(256)
Unconstrained households	135	165	30	0.35	0.22	(37)
HOUSEHOLDS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Standards households	135	170	34	0.35	0.25	(91)
Control households	144	168	24	0.23	0.17	(89)
Unconstrained households	153	187	34	0.39	0.22	(18)
Did Not Meet at Enrollment						
Minimum Standards households	128	170	42	0.44	0.33	(64)
Control households	140	173	33	0.33	0.24	(50)
Unconstrained households	[133]	[182]	[49]	[0.58]	[0.37]	(10)
Met at Enrollment						
Minimum Standards households	150	166	16	0.13	0.11	(27)
Control households	150	163	13	0.12	0.09	(39)
Unconstrained households	[178]	[193]	[15]	[0.15]	[0.08]	(8)
HOUSEHOLDS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Standards households	114	128	14	0.15	0.12	(72)
Control households	120	133	12	0.14	0.10	(167)
Unconstrained households	118	144	26	0.31	0.22	(19)
Did Not Meet at Enrollment						
Minimum Standards households	108	125	17	0.17	0.16	(67)
Control households	117	129	12	0.14	0.10	(157)
Unconstrained households	112	137	26	0.32	0.23	(18)
Met at Enrollment						
Minimum Standards households	[192]	[163]	[-29]	[-0.15]	[-0.15]	(5)
Control households	[168]	[189]	[21]	[0.17]	[0.31]	(10)
Unconstrained households	[233]	[262]	[29]	[0.12]	[0.20]	(1)

SAMPLE: Minimum Standards, Control, and Unconstrained households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.

DATA SOURCES: Initial and monthly Household Report Forms and payments file.

NOTES: Brackets indicate amounts based on 15 or fewer observations. Sample sizes may differ between all households and other groups due to availability of data on housing requirement status.

Table 25

CHANGES IN HOUSING EXPENDITURES FROM ENROLLMENT TO TWO YEARS AFTER ENROLLMENT
BY TREATMENT TYPE (MINIMUM RENT LOW REQUIREMENTS): ALL HOUSEHOLDS
(Friedman and Weinberg, 1979, Table V-2)

HOUSEHOLD GROUP	HOUSING EXPENDITURES AT ENROLLMENT	AT TWO YEARS	CHANGE IN EXPENDITURES AMOUNT	PERCENTAGE MEAN OF RATIO	RATIO OF MEANS	SAMPLE SIZE
PITTSBURGH						
ALL HOUSEHOLDS						
Minimum Rent Low households	$109	$130	$21	0.23	0.19	(122)
Control households	115	134	18	0.18	0.16	(302)
Unconstrained households	107	128	21	0.22	0.20	(59)
HOUSEHOLDS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Rent Low households	115	138	23	0.23	0.17	(104)
Control households	125	147	22	0.21	0.18	(228)
Unconstrained households	117	142	25	0.25	0.21	(44)
Did Not Meet at Enrollment						
Minimum Rent Low households	93	129	36	0.42	0.39	(27)
Control households	90	129	39	0.46	0.43	(48)
Unconstrained households	[92]	[129]	[37]	[0.42]	[0.40]	(10)
Met at Enrollment						
Minimum Rent Low households	123	141	18	0.16	0.15	(77)
Control households	134	152	18	0.15	0.13	(180)
Unconstrained households	124	145	21	0.20	0.17	(34)
HOUSEHOLDS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Rent Low households	74	86	12	0.20	0.16	(18)
Control households	87	93	6	0.09	0.07	(74)
Unconstrained households	[79]	[90]	[11]	[0.15]	[0.14]	(15)
Did Not Meet at Enrollment						
Minimum Rent Low households	74	86	12	0.20	0.16	(18)
Control households	84	93	9	0.11	0.11	(69)
Unconstrained households	[79]	[90]	[11]	[0.15]	[0.14]	(15)
Met at Enrollment						
Minimum Rent Low households	—	—	—	—	—	(0)
Control households	[121]	[88]	(-33)	[-0.25]	[-0.27]	(5)
Unconstrained households	—	—	—	—	—	(0)
PHOENIX						
ALL HOUSEHOLDS						
Minimum Rent Low households	$124	$158	$34	0.34	0.27	(89)
Control households	129	145	16	0.18	0.12	(256)
Unconstrained households	135	165	30	0.35	0.22	(37)
HOUSEHOLDS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Rent Low households	133	172	39	0.40	0.29	(69)
Control households	154	182	27	0.26	0.18	(134)
Unconstrained households	153	191	38	0.42	0.25	(25)
Did Not Meet at Enrollment						
Minimum Rent Low households	101	169	67	0.78	0.66	(27)
Control households	103	177	74	0.84	0.72	(28)
Unconstrained households	[108]	[189]	[81]	[1.05]	[0.75]	(8)
Met at Enrollment						
Minimum Rent Low households	154	174	20	0.15	0.13	(42)
Control households	168	183	15	0.10	0.09	(106)
Unconstrained households	174	192	18	0.13	0.10	(17)
HOUSEHOLDS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Rent Low households	94	109	16	0.17	0.17	(20)
Control households	101	105	5	0.09	0.05	(122)
Unconstrained households	[97]	[110]	[13]	[0.19]	[0.13]	(12)
Did Not Meet at Enrollment						
Minimum Rent Low households	90	104	15	0.17	0.17	(18)
Control households	95	104	9	0.12	0.09	(113)
Unconstrained households	[90]	[111]	[21]	[0.25]	[0.23]	(11)
Met at Enrollment						
Minimum Rent Low households	[131]	[157]	[26]	[0.20]	[0.20]	(2)
Control households	[169]	[115]	(-54)	[-0.32]	[-0.32]	(9)
Unconstrained households	[180]	[105]	[-75]	[-0.41]	[-0.42]	(1)

SAMPLE: Minimum Rent Low, Control, and Unconstrained households active at two years after enrollment, excluding those with
enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.
DATA SOURCES: Initial and monthly Household Report forms and payments file.
NOTES: Brackets indicate amounts based on 15 or fewer observations. Sample sizes may differ between all households and other
groups due to availability of data on housing requirement status.

Table 26

CHANGES IN HOUSING EXPENDITURES FROM ENROLLMENT TO TWO YEARS AFTER ENROLLMENT
BY TREATMENT TYPE (MINIMUM RENT HIGH REQUIREMENTS): ALL HOUSEHOLDS
(Friedman and Weinberg, 1979, Table V-3)

| HOUSEHOLD GROUP | HOUSING EXPENDITURES | | CHANGE IN EXPENDITURES | | | SAMPLE SIZE |
	AT ENROLL-MENT	AT TWO YEARS	AMOUNT	PERCENTAGE MEAN OF RATIO	RATIO OF MEANS	
PITTSBURGH						
ALL HOUSEHOLDS						
Minimum Rent High households	$113	$139	$25	0.24	0.22	(111)
Control households	115	134	18	0.18	0.16	(302)
Unconstrained households	107	128	21	0.22	0.20	(59)
HOUSEHOLDS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Rent High households	127	165	37	0.34	0.29	(59)
Control households	137	164	27	0.25	0.20	(136)
Unconstrained households	124	156	31	0.31	0.25	(27)
Did Not Meet at Enrollment						
Minimum Rent High households	105	166	62	0.60	0.59	(26)
Control households	106	154	48	0.50	0.45	(47)
Unconstrained households	[102]	[157]	[55]	[0.58]	[0.54]	(12)
Met at Enrollment						
Minimum Rent High households	145	164	19	0.13	0.13	(33)
Control households	153	169	16	0.12	0.10	(89)
Unconstrained households	[142]	[155]	[13]	[0.09]	[0.09]	(15)
HOUSEHOLDS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Rent High households	97	109	12	0.13	0.12	(52)
Control households	98	109	11	0.13	0.11	(166)
Unconstrained households	93	106	13	0.15	0.14	(32)
Did Not Meet at Enrollment						
Minimum Rent High households	97	109	12	0.13	0.12	(52)
Control households	96	109	13	0.14	0.14	(163)
Unconstrained households	91	104	13	0.16	0.14	(30)
Met at Enrollment						
Minimum Rent High households	—	—	—	—	—	(0)
Control households	[172]	[123]	[-49]	[-0.31]	[-0.28]	(3)
Unconstrained households	[123]	[128]	[6]	[0.04]	[0.05]	(2)
PHOENIX						
ALL HOUSEHOLDS						
Minimum Rent High households	$126	$166	$40	0.36	0.32	(93)
Control households	129	145	16	0.18	0.12	(256)
Unconstrained households	135	165	30	0.35	0.22	(37)
HOUSEHOLDS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Rent High households	149	208	59	0.49	0.40	(46)
Control households	170	199	29	0.26	0.17	(85)
Unconstrained households	159	199	40	0.45	0.25	(16)
Did Not Meet at Enrollment						
Minimum Rent High households	128	213	84	0.73	0.66	(28)
Control households	132	201	69	0.66	0.52	(28)
Unconstrained households	[117]	[188]	[71]	[0.85]	[0.61]	(8)
Met at Enrollment						
Minimum Rent High households	183	202	19	0.11	0.10	(18)
Control households	189	199	10	0.06	0.05	(57)
Unconstrained households	[202]	[210]	[8]	[0.05]	[0.04]	(8)
HOUSEHOLDS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Rent High households	103	124	22	0.23	0.21	(47)
Control households	108	118	10	0.13	0.09	(171)
Unconstrained households	116	139	22	0.27	0.19	(21)
Did Not Meet at Enrollment						
Minimum Rent High households	100	118	18	0.20	0.18	(45)
Control households	106	118	11	0.14	0.10	(166)
Unconstrained households	113	141	27	0.30	0.24	(20)
Met at Enrollment						
Minimum Rent High households	[165]	[275]	[110]	[0.72]	[0.67]	(2)
Control households	[171]	[138]	[-33]	[-0.19]	[-0.19]	(5)
Unconstrained households	[180]	[105]	[-75]	[-0.41]	[-0.04]	(1)

SAMPLE: Minimum Rent High, Control, and Unconstrained households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.
DATA SOURCES: Initial and monthly Household Report Forms and payments file.
NOTES: Brackets indicate amounts based on 15 or fewer observations. Sample sizes may differ between all households and other groups due to availability of data on housing requirement status.

Table 27

CHANGES IN HOUSING EXPENDITURES FROM ENROLLMENT TO TWO YEARS AFTER ENROLLMENT
BY TREATMENT TYPE (MINIMUM STANDARDS REQUIREMENTS): ALL STAYERS
(Friedman and Weinberg, 1979, Table V-4)

HOUSEHOLD GROUP	HOUSING EXPENDITURES AT ENROLLMENT	AT TWO YEARS	CHANGE IN EXPENDITURES AMOUNT	PERCENTAGE MEAN OF RATIO	RATIO OF MEANS	SAMPLE SIZE
PITTSBURGH						
ALL STAYERS						
Minimum Standards household	$110	$121	$12	0.13	0.11	(116)
Control households	113	127	14	0.13	0.12	(201)
Unconstrained households	106	119	13	0.12	0.12	(37)
STAYERS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Standards households	121	135	14	0.15	0.12	(54)
Control households	130	150	20	0.16	0.15	(63)
Unconstrained households	[125]	[132]	[8]	[0.06]	[0.06]	(9)
Did Not Meet at Enrollment						
Minimum Standards households	114	126	9	0.11	0.08	(22)
Control households	132	158	26	0.21	0.20	(17)
Unconstrained households	[90]	[96]	[6]	[0.06]	[0.06]	(2)
Met at Enrollment						
Minimum Standards households	126	141	15	0.16	0.12	(32)
Control households	130	148	18	0.14	0.14	(46)
Unconstrained households	[135]	[143]	[8]	[0.06]	[0.06]	(7)
STAYERS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Standards households	100	109	9	0.11	0.09	(62)
Control households	105	117	12	0.12	0.11	(138)
Unconstrained households	100	114	14	0.16	0.14	(28)
Did Not Meet at Enrollment						
Minimum Standards household	100	109	9	0.11	0.09	(62)
Control households	105	117	12	0.12	0.11	(138)
Unconstrained households	100	114	14	0.16	0.14	(28)
Met at Enrollment						
Minimum Standards households	--	--	--	--	--	(0)
Control households	--	--	--	--	--	(0)
Unconstrained	--	--	--	--	--	(0)
PHOENIX						
ALL STAYERS						
Minimum Standards households	$120	$127	$8	0.07	0.07	(73)
Control households	125	132	7	0.07	0.06	(129)
Unconstrained households	145	151	7	0.08	0.05	(16)
STAYERS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Standards households	135	142	7	0.05	0.05	(36)
Control households	148	155	7	0.07	0.05	(44)
Unconstrained households	[182]	[187]	[5]	[0.05]	[0.03]	(9)
Did Not Meet at Enrollment						
Minimum Standards household	127	131	5	0.04	0.04	(20)
Control households	161	165	3	0.02	0.02	(17)
Unconstrained households	[171]	[181]	[10]	[0.07]	[0.06]	(3)
Met at Enrollment						
Minimum Standards household	144	155	11	0.07	0.08	(16)
Control households	139	149	10	0.10	0.07	(27)
Unconstrained households	[188]	[190]	[2]	[0.04]	[0.01]	(6)
STAYERS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Standards households	105	113	8	0.09	0.08	(37)
Control households	113	120	7	0.07	0.06	(85)
Unconstrained households	[96]	[106]	[9]	[0.12]	[0.09]	(7)
Did Not Meet at Enrollment						
Minimum Standards household	105	113	8	0.09	0.08	(37)
Control households	113	120	7	0.07	0.06	(85)
Unconstrained households	[96]	[106]	[9]	[0.12]	[0.09]	(7)
Met at Enrollment						
Minimum Standards households	--	--	--	--	--	(0)
Control households	--	--	--	--	--	(0)
Unconstrained households	--	--	--	--	--	(0)

SAMPLE: Minimum Standards, Control, and Unconstrained households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.

DATA SOURCES: Initial and monthly Household Report Forms and payments file.

NOTES: Brackets indicate amounts based on 15 or fewer observations. Sample sizes may differ between all households and other groups due to availability of data on housing requirement status.

Table 28

CHANGES IN HOUSING EXPENDITURES FROM ENROLLMENT TO TWO YEARS AFTER ENROLLMENT
BY TREATMENT TYPE (MINIMUM RENT LOW REQUIREMENTS): ALL STAYERS
(Friedman and Weinberg, 1979, Table V-5)

| HOUSEHOLD GROUP | HOUSING EXPENDITURES | | CHANGE IN EXPENDITURES | | | SAMPLE SIZE |
	AT ENROLL-MENT	AT TWO YEARS	AMOUNT	PERCENTAGE MEAN OF RATIO	RATIO OF MEANS	
PITTSBURGH						
ALL STAYERS						
Minimum Rent Low households	$110	$123	$13	0.14	0.12	(78)
Control households	113	127	14	0.13	0.12	(201)
Unconstrained households	106	119	13	0.12	0.12	(37)
STAYERS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Rent Low households	119	132	13	0.12	0.11	(62)
Control households	125	141	16	0.14	0.13	(141)
Unconstrained households	120	133	14	0.12	0.12	(24)
Did Not Meet at Enrollment						
Minimum Rent Low households	[100]	[119]	[19]	[0.21]	[0.19]	(12)
Control households	93	111	18	0.21	0.19	(16)
Unconstrained households	90	110	20	0.24	0.22	(4)
Met at Enrollment						
Minimum Rent Low households	123	135	11	0.10	0.09	(50)
Control households	129	145	16	0.13	0.12	(125)
Unconstrained households	126	138	12	0.10	0.10	(20)
STAYERS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Rent Low households	75	88	13	0.19	0.17	(16)
Control households	84	94	10	0.13	0.12	(60)
Unconstrained households	[81]	[91]	[11]	[0.13]	[0.14]	(13)
Did Not Meet at Enrollment						
Minimum Rent Low households	75	88	13	0.19	0.17	(16)
Control households	84	94	10	0.13	0.12	(60)
Unconstrained households	[81]	[91]	[11]	[0.13]	[0.14]	(13)
Met at Enrollment						
Minimum Rent Low households	--	--	--	--	--	(0)
Control households	--	--	--	--	--	(0)
Unconstrained	--	--	--	--	--	(0)
PHOENIX						
ALL STAYERS						
Minimum Rent Low households	$118	$130	$12	0.12	0.10	(31)
Control households	125	132	7	0.07	0.06	(129)
Unconstrained households	145	151	7	0.08	0.05	(16)
STAYERS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Rent Low households	142	156	14	0.12	0.10	(19)
Control households	169	177	7	0.05	0.04	(55)
Unconstrained households	[189]	[196]	[7]	[0.06]	[0.03]	(9)
Did Not Meet at Enrollment						
Minimum Rent Low households	[114]	[135]	[21]	[0.22]	[0.18]	(3)
Control households	[116]	[128]	[12]	[0.10]	[0.10]	(3)
Unconstrained households	[265]	[261]	[-4]	[-0.02]	[-0.02]	(1)
Met at Enrollment						
Minimum Rent Low households	147	160	13	0.10	0.09	(16)
Control households	172	179	7	0.04	0.04	(52)
Unconstrained households	[180]	[188]	[8]	[0.07]	[0.04]	(8)
STAYERS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Rent Low households	80	90	10	0.13	0.12	(12)
Control households	92	98	7	0.09	0.08	(74)
Unconstrained households	[87]	[94]	[7]	[0.11]	[0.08]	(7)
Did Not Meet at Enrollment						
Minimum Rent Low households	[80]	[90]	[10]	[0.13]	[0.13]	(12)
Control households	92	98	7	0.09	0.08	(74)
Unconstrained households	[87]	[94]	[7]	[0.11]	[0.08]	(7)
Met at Enrollment						
Minimum Rent Low households	--	--	--	--	--	(0)
Control households	--	--	--	--	--	(0)
Unconstrained households	--	--	--	--	--	(0)

SAMPLE: Minimum Rent Low, Control, and Unconstrained households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.

DATA SOURCES: Initial and monthly Household Report Forms and payments file.

NOTES: Brackets indicate amounts based on 15 or fewer observations. Sample sizes may differ between all households and other groups due to availability of data on housing requirement status.

Table 29

CHANGES IN HOUSING EXPENDITURES FROM ENROLLMENT TO TWO YEARS AFTER ENROLLMENT
BY TREATMENT TYPE (MINIMUM RENT HIGH REQUIREMENTS): ALL STAYERS

(Friedman and Weinberg, 1979, Table V-6)

| HOUSEHOLD GROUP | HOUSING EXPENDITURES | | CHANGE IN EXPENDITURES | | | |
	AT ENROLL-MENT	AT TWO YEARS	AMOUNT	PERCENTAGE MEAN OF RATIO	RATIO OF MEANS	SAMPLE SIZE
	PITTSBURGH					
ALL STAYERS						
Minimum Rent High households	$112	$128	$16	0.14	0.14	(72)
Control households	113	127	14	0.13	0.12	(201)
Unconstrained households	106	119	13	0.12	0.12	(37)
STAYERS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Rent High households	133	154	22	0.18	0.17	(30)
Control households	141	159	18	0.14	0.13	(76)
Unconstrained households	[134]	[149]	[15]	[0.12]	[0.11]	(13)
Did Not Meet at Enrollment						
Minimum Rent High households	[103]	[139]	[37]	[0.35]	[0.36]	(9)
Control households	119	150	31	0.26	0.26	(19)
Unconstrained households	[120]	[143]	[23]	[0.19]	[0.19]	(3)
Met at Enrollment						
Minimum Rent High households	146	161	15	0.10	0.10	(21)
Control households	148	162	14	0.10	0.09	(57)
Unconstrained households	[138]	[151]	[13]	[0.10]	[0.09]	(10)
STAYERS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Rent High households	97	109	12	0.12	0.12	(42)
Control households	96	108	12	0.13	0.13	(125)
Unconstrained households	91	102	11	0.13	0.12	(24)
Did Not Meet at Enrollment						
Minimum Rent High households	97	109	12	0.12	0.14	(42)
Control households	96	108	12	0.13	0.13	(125)
Unconstrained households	91	102	11	0.13	0.12	(24)
Met at Enrollment						
Minimum Rent High households	--	--	--	--	--	(0)
Control households	--	--	--	--	--	(0)
Unconstrained	--	--	--	--	--	(0)
	PHOENIX					
ALL STAYERS						
Minimum Rent High households	$117	$128	$11	0.10	0.09	(31)
Control households	125	132	7	0.07	0.06	(129)
Unconstrained households	145	151	7	0.08	0.05	(16)
STAYERS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Rent High households	[189]	[197]	[9]	[0.05]	[0.05]	(7)
Control households	186	192	6	0.03	0.03	(37)
Unconstrained households	[197]	[202]	[5]	[0.05]	[0.03]	(6)
Did Not Meet at Enrollment						
Minimum Rent High households	--	--	--	--	--	(0)
Control households	[151]	[162]	[11]	[0.07]	[0.07]	(5)
Unconstrained households	[99]	[127]	[28]	[0.28]	[0.03]	(1)
Met at Enrollment						
Minimum Rent High households	[189]	[197]	[9]	[0.05]	[0.05]	(7)
Control households	191	197	6	0.03	0.03	(32)
Unconstrained households	[217]	[217]	[0]	[0.01]	[0.00]	(5)
STAYERS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Rent High households	96	108	12	0.12	0.13	(24)
Control households	100	107	7	0.08	0.07	(92)
Unconstrained households	[113]	[121]	[8]	[0.10]	[0.07]	(10)
Did Not Meet at Enrollment						
Minimum Rent High households	96	108	12	0.12	0.13	(24)
Control households	100	107	7	0.08	0.07	(92)
Unconstrained households	[113]]	[121]	[8]	[0.10]	[0.07]	(10)
Met at Enrollment						
Minimum Rent High households	--	--	--	--	--	(0)
Control households	--	--	--	--	--	(0)
Unconstrained households	--	--	--	--	--	(0)

SAMPLE: Minimum Rent High, Control, and Unconstrained households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.

DATA SOURCES: Initial and monthly Household Report Forms and payments file.

NOTES: Brackets indicate amounts based on 15 or fewer observations. Sample sizes may differ between all households and other groups due to availability of data on housing requirement status.

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Table 30

(Friedman and Weinberg, 1979, Table V-7)

HOUSEHOLD GROUP	HOUSING EXPENDITURES		CHANGE IN EXPENDITURES			SAMPLE SIZE
	AT ENROLL-MENT	AT TWO YEARS	AMOUNT	PERCENTAGE		
				MEAN OF RATIO	RATIO OF MEANS	
PITTSBURGH						
ALL MOVERS						
Minimum Standards households	$108	$142	$34	0.37	0.31	(77)
Control households	121	147	26	0.28	0.21	(101)
Unconstrained households	109	145	36	0.39	0.33	(22)
MOVERS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Standards households	115	152	37	0.40	0.32	(33)
Control households	138	167	29	0.23	0.21	(20)
Unconstrained households	[115]	[134]	[19]	[0.19]	[0.17]	(5)
Did Not Meet at Enrollment						
Minimum Standards households	115	156	41	0.45	0.36	(27)
Control households	120	150	30	0.26	0.25	(12)
Unconstrained households	[106]	[134]	[28]	[0.27]	[0.26]	(4)
Met at Enrollment						
Minimum Standards households	[118]	[136]	[17]	[0.16]	[0.14]	(6)
Control households	[164]	[191]	[27]	[0.17]	[0.16]	(8)
Unconstrained households	[153]	[137]	[-16]	[-0.10]	[-0.10]	(1)
MOVERS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Standards households	103	135	32	0.35	0.31	(44)
Control households	117	142	26	0.30	0.22	(81)
Unconstrained households	107	148	41	0.44	0.38	(17)
Did Not Meet at Enrollment						
Minimum Standards households	100	134	34	0.37	0.34	(40)
Control households	113	140	27	0.30	0.24	(72)
Unconstrained households	107	148	41	0.44	0.38	(17)
Met at Enrollment						
Minimum Standards households	[129]	[144]	[15]	[0.13]	[0.12]	(4)
Control households	[149]	[157]	[8]	[0.20]	[0.05]	(8)
Unconstrained households	--	--	--	--	--	(0)
PHOENIX						
ALL MOVERS						
Minimum Standards households	$130	$170	$39	0.42	0.30	(90)
Control households	133	159	26	0.28	0.20	(127)
Unconstrained households	128	175	48	0.55	0.38	(21)
MOVERS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Standards households	135	187	52	0.54	0.39	(55)
Control households	141	181	41	0.40	0.29	(45)
Unconstrained households	[124]	[187]	[64]	[0.72]	[0.52]	(9)
Did Not Meet at Enrollment						
Minimum Standards households	129	188	59	0.62	0.46	(44)
Control households	129	177	48	0.49	0.37	(33)
Unconstrained households	[117]	[183]	[66]	[0.80]	[0.56]	(7)
Met at Enrollment						
Minimum Standards households	[157]	[181]	[24]	[0.20]	[0.21]	(11)
Control households	[173]	[194]	[21]	[0.16]	[0.12]	(12)
Unconstrained households	[148]	[203]	[55]	[0.45]	[0.37]	(2)
MOVERS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Standards households	123	143	20	0.22	0.16	(35)
Control households	128	147	18	0.22	0.14	(82)
Unconstrained households	[131]	[166]	[36]	[0.42]	[0.27]	(12)
Did Not Meet at Enrollment						
Minimum Standards households	112	140	28	0.28	0.25	(30)
Control households	123	141	18	0.23	0.15	(72)
Unconstrained households	[121]	[157]	[36]	[0.44]	[0.30]	(11)
Met at Enrollment						
Minimum Standards households	[192]	[163]	[-29]	[-0.15]	[-0.13]	(5)
Control households	[168]	[189]	[21]	[0.17]	[0.13]	(10)
Unconstrained households	[233]	[262]	[21]	[0.12]	[0.09]	(1)

SAMPLE: Minimum Standards, Control and Unconstrained households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.

DATA SOURCES: Initial and monthly Household Report Forms and payments file.

NOTES: Brackets indicate amounts based on 15 or fewer observations. Sample sizes may differ between all households and other groups due to availability of data on housing requirement status.

Table 31

CHANGES IN HOUSING EXPENDITURES FROM ENROLLMENT TO TWO YEARS AFTER ENROLLMENT
BY TREATMENT TYPE (MINIMUM RENT LOW REQUIREMENTS): ALL MOVERS
(Friedman and Weinberg, 1979, Table V-8)

HOUSEHOLD GROUP	HOUSING EXPENDITURES		CHANGE IN EXPENDITURES			SAMPLE SIZE
	AT ENROLL- MENT	AT TWO YEARS	AMOUNT	PERCENTAGE MEAN OF RATIO	RATIO OF MEANS	
PITTSBURGH						
ALL MOVERS						
Minimum Rent Low households	$107	$143	$36	0.38	0.34	(44)
Control households	121	147	26	0.28	0.21	(101)
Unconstrained households	109	145	36	0.38	0.33	(22)
MOVERS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Rent Low households	109	147	38	0.39	0.35	(42)
Control households	124	157	33	0.34	0.27	(87)
Unconstrained households	113	151	38	0.39	0.34	(20)
Did Not Meet at Enrollment						
Minimum Rent Low households	87	138	50	0.59	0.57	(15)
Control households	89	138	49	0.59	0.55	(32)
Unconstrained households	[93]	[141]	[48]	[0.53]	[0.52]	(6)
Met at Enrollment						
Minimum Rent Low households	122	152	30	0.28	0.25	(27)
Control households	145	168	23	0.20	0.16	(55)
Unconstrained households	[122]	[156]	[34]	[0.33]	[0.28]	(14)
MOVERS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Rent Low households	[62]	[68]	[6]	[0.23]	[0.10]	(2)
Control households	[99]	[89]	(-11)	[-0.08]	[-0.11]	(14)
Unconstrained households	[64]	[81]	[17]	[0.31]	[0.27]	(2)
Did Not Meet at Enrollment						
Minimum Rent Low households	[62]	[68]	[6]	[0.23]	[0.09]	(2)
Control households	[87]	[88]	[1]	[0.01]	[0.01]	(9)
Unconstrained households	[64]	[81]	[17]	[0.31]	[0.27]	(2)
Met at Enrollment						
Minimum Rent Low households	--	--	--	--	--	(0)
Control households	[121]	[88]	[-33]	[-0.25]	[-0.02]	(5)
Unconstrained households	--	--	--	--	--	(0)
PHOENIX						
ALL MOVERS						
Minimum Rent Low households	$128	$173	$45	0.46	0.35	(58)
Control households	133	159	26	0.28	0.20	(127)
Unconstrained households	128	175	48	0.55	0.38	(21)
MOVERS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Rent Low households	130	178	48	0.50	0.37	(50)
Control households	144	185	41	0.40	0.28	(79)
Unconstrained households	133	189	56	0.63	0.42	(16)
Did Not Meet at Enrollment						
Minimum Rent Low households	100	173	73	0.85	0.73	(24)
Control households	101	182	81	0.93	0.80	(25)
Unconstrained households	[86]	[179]	[93]	[1.20]	[1.08]	(7)
Met at Enrollment						
Minimum Rent Low households	158	183	25	0.17	0.16	(26)
Control households	164	187	22	0.16	0.13	(54)
Unconstrained households	[169]	[196]	[27]	[0.18]	[0.16]	(9)
MOVERS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Rent Low households	[114]	[139]	[25]	[0.24]	[0.22]	(8)
Control households	114	116	2	0.09	0.02	(48)
Unconstrained households	[112]	[133]	[21]	[0.30]	[0.19]	(5)
Did Not Meet at Enrollment						
Minimum Rent Low households	[108]	[133]	[25]	[0.25]	[0.23]	(6)
Control households	101	116	16	0.18	0.16	(39)
Unconstrained households	[95]	[140]	[45]	[0.48]	[0.47]	(4)
Met at Enrollment						
Minimum Rent Low households	[131]	[157]	[26]	[0.20]	[0.20]	(2)
Control households	[169]	[115]	[-54]	[-0.32]	[-0.32]	(9)
Unconstrained households	[180]	[105]	[-75]	[-0.42]	[-0.42]	(1)

SAMPLE: Minimum Rent Low, Control, and Unconstrained households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.

DATA SOURCES: Initial and monthly Household Report Forms and payments file.

NOTES: Brackets indicate amounts based on 15 or fewer observations. Sample sizes may differ between all households and other groups due to availability of data on housing requirement status.

Table 32

CHANGES IN HOUSING EXPENDITURES FROM ENROLLMENT TO TWO YEARS AFTER ENROLLMENT
BY TREATMENT TYPE (MINIMUM RENT HIGH REQUIREMENTS): ALL MOVERS
(Friedman and Weinberg, 1979, Table V-9)

HOUSEHOLD GROUP	HOUSING EXPENDITURES		CHANGE IN EXPENDITURES			SAMPLE SIZE
	AT ENROLL-MENT	AT TWO YEARS	AMOUNT	PERCENTAGE		
				MEAN OF RATIO	RATIO OF MEANS	
PITTSBURGH						
ALL MOVERS						
Minimum Rent High households	$115	$159	$43	0.42	0.37	(39)
Control households	121	147	26	0.28	0.21	(101)
Unconstrained households	109	145	36	0.38	0.33	(22)
MOVERS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Rent High households	121	175	54	0.51	0.45	(29)
Control households	132	170	38	0.39	0.29	(60)
Unconstrained households	[115]	[162]	[46]	[0.48]	[0.40]	(14)
Did Not Meet at Enrollment						
Minimum Rent High households	106	180	75	0.73	0.71	(17)
Control households	98	157	60	0.66	0.61	(28)
Unconstrained households	[96]	[161]	[66]	[0.71]	[0.69]	(9)
Met at Enrollment						
Minimum Rent High households	[144]	[168]	[25]	[0.19]	[0.17]	(12)
Control households	162	182	19	0.15	0.12	(32)
Unconstrained households	[151]	[162]	[12]	[0.07]	[0.08]	(5)
MOVERS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Rent High household	[97]	[110]	[13]	[0.18]	[0.13]	(10)
Control households	104	113	9	0.13	0.09	(41)
Unconstrained households	[98]	[116]	[18]	[0.21]	[0.18]	(8)
Did Not Meet at Enrollment						
Minimum Rent High household	[97]	[110]	[13]	[0.18]	[0.13]	(10)
Control households	99	113	14	0.17	0.14	(38)
Unconstrained households	[89]	[112]	[23]	[0.27]	[0.26]	(6)
Met at Enrollment						
Minimum Rent High household	--	--	--	--	--	(0)
Control households	[172]	[123]	[-49]	[-0.31]	[-0.28]	(3)
Unconstrained households	[123]	[128]	[6]	[0.04]	[0.04]	(2)
PHOENIX						
ALL MOVERS						
Minimum Rent High households	$130	$185	$54	0.48	0.42	(62)
Control households	133	159	26	0.28	0.20	(127)
Unconstrained households	128	175	48	0.55	0.38	(21)
MOVERS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Rent High households	142	210	68	0.57	0.48	(39)
Control households	158	205	47	0.43	0.30	(48)
Unconstrained households	[137]	[197]	[61]	[0.69]	[0.45]	(10)
Did Not Meet at Enrollment						
Minimum Rent High household	128	213	84	0.73	0.66	(28)
Control households	128	210	81	0.79	0.63	(23)
Unconstrained households	[119]	[197]	[78]	[0.93]	[0.66]	(7)
Met at Enrollment						
Minimum Rent High households	[179]	[204]	[25]	[0.15]	[0.14]	(11)
Control household	185	201	15	0.10	0.08	(25)
Unconstrained household	[178]	[199]	[21]	[0.12]	[0.12]	(3)
MOVERS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Rent High households	109	141	32	0.34	0.29	(23)
Control household	117	131	13	0.19	0.11	(29)
Unconstrained household	[119]	[155]	[36]	[0.42]	[0.30]	(11)
Did Not Meet at Enrollment						
Minimum Rent High households	104	128	24	0.30	0.23	(21)
Control households	114	130	17	0.22	0.15	(74)
Unconstrained household	[113]	[160]	[47]	[0.51]	[0.42]	(10)
Met at Enrollment						
Minimum Rent High household	[165]	[275]	[110]	[0.72]	[0.67]	(2)
Control household	[171]	[139]	[-33]	[-0.19]	[-0.19]	(5)
Unconstrained households	[180]	[105]	[-75]	[-0.42]	[-0.42]	(1)

SAMPLE: Minimum Rent High, Control, and Unconstrained households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.

DATA SOURCES: Initial and monthly Household Report Forms and payments file.

NOTES: Brackets indicate amounts based on 15 or fewer observations. Sample sizes may differ between all households and other groups due to availability of data on housing requirement status.

6.4   Rent Burden

This section gives mean and/or median rent burden for Experimental and Control households at enrollment and two years after enrollment. Rent burden is defined as the rent to income ratio at enrollment and as the ratio of rent net of subsidy payments to income at two years--that is,

$$B_1 = \frac{R - S}{Y}$$

where

B_1 = rent burden

R = gross monthly rent including utilities other than telephone

Y = household monthly income (average monthly income for previous 12 months)

S = the allowance payment (zero at enrollment).

It may be noted that this definition differs from the one that would normally be used for nonhousing income transfer programs, viz.:

$$B_2 = \frac{R}{Y + S} \cdot$$

B_2 is often more appropriate for income transfer programs, since the use of the transfer is discretionary. The transfer is additional income that is no more appropriately subtracted from housing expenditures than from spending on clothing or food. This is not the case when programs are considered in terms of their effect on households' housing situations. Thus, for example, a program that increased tenant rent by the amount of the allowance payment would necessarily increase rent burden as defined by B_2, even though the households' out-of-pocket spending for rent would be unchanged. The B_1 definition is accordingly more appropriate when comparing programs in terms of housing impact.[1]

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[1] More basically, of course, rent burden is a poor measure of the financial burden borne by the household. It is difficult to argue that a household with an income of $10,000 is less able to afford an annual rent of $3,000, which leaves it with $7,000 for other needs, than a similar household with an income of $4,000 could afford a rent of $1,000, which leaves it with $3,000 for other needs.

TABLE 33

CHANGES IN MEDIAN RENT BURDEN
FROM ENROLLMENT TO TWO YEARS
(Friedman and Weinberg, 1978, Table X-2)

| TREATMENT GROUP | MEDIAN RENT BURDEN | | MEDIAN CHANGE IN RENT BURDEN | SAMPLE SIZE |
	At Enrollment[a]	At Two Years[b]		
PITTSBURGH				
All Percent of Rent households	0.32	0.21	-0.11	(388)
Percentage rebate:				
20%	0.29	0.22	-0.06	(62)
30%	0.33	0.25	-0.09	(83)
40%	0.31	0.20	-0.11	(109)
50%	0.33	0.17	-0.15	(106)
60%	0.40	0.18	-0.22	(28)
Control households	0.29	0.26	-0.04	(290)
Unconstrained households	0.35	0.20	-0.17	(59)
PHOENIX				
All Percent of Rent households	0.32	0.24	-0.09	(282)
Percentage rebate:				
20%	0.37	0.31	-0.01	(45)
30%	0.31	0.26	-0.06	(79)
40%	0.31	0.22	-0.11	(59)
50%	0.33	0.20	-0.14	(78)
60%	0.39	0.19	-0.18	(21)
Control households	0.32	0.30	-0.02	(256)
Unconstrained households	0.33	0.13	-0.23	(38)

SAMPLE: Percent of Rent, Control, and Unconstrained households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.

DATA SOURCES: Initial and monthly Household Report Forms, and payments file.

a. Rent burden at enrollment is defined as the ratio of enrollment rent to enrollment income.

b. Rent burden at two years is defined as the ratio of net two-year rent (gross rent minus allowance payment) to two-year income.

TABLE 34

CHANGE IN MEAN RENT BURDEN
FROM ENROLLMENT TO TWO YEARS
(Friedman and Weinberg, 1978, Table X-3)

TREATMENT GROUP	MEAN RENT BURDEN		MEAN CHANGE IN RENT BURDEN	SAMPLE SIZE
	At Enrollment[a]	At Two Years[b]		
PITTSBURGH				
All Percent of Rent households	0.36	0.23	-0.14	(388)
Percentage rebate:				
20%	0.35	0.26	-0.09	(62)
30%	0.34	0.27	-0.08	(83)
40%	0.36	0.22	-0.14	(109)
50%	0.38	0.20	-0.18	(106)
60%	0.44	0.19	-0.26	(28)
Control households	0.33	0.29	-0.04	(290)
Unconstrained households	0.39	0.20	-0.19	(59)
PHOENIX				
All Percent of Rent households	0.37	0.27	-0.10	(282)
Percentage rebate:				
20%	0.37	0.34	-0.03	(45)
30%	0.35	0.30	-0.06	(79)
40%	0.35	0.25	-0.11	(59)
50%	0.38	0.24	-0.15	(78)
60%	0.41	0.22	-0.19	(21)
Control households	0.35	0.34	-0.01	(256)
Unconstrained households	0.38	0.09	-0.29	(38)

SAMPLE: Percent of Rent, Control, and Unconstrained households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.

DATA SOURCES: Initial and monthly Household Report Forms

a. Rent burden at enrollment is defined as the ratio of enrollment rent to enrollment income.

b. Rent burden at two years is defined as the ratio of net two-year rent (gross rent minus allowance payment) to two-year income.

Table 35

MEAN RENT BURDENS AT ENROLLMENT AND TWO YEARS AFTER ENROLLMENT
BY HOUSING REQUIREMENT STATUS FOR MINIMUM STANDARDS HOUSEHOLDS
(Payment as Rent Reduction)
(Friedman and Weinberg, 1979, Table VI-1)

HOUSEHOLD GROUP	MEAN RENT BURDEN		MEAN REDUCTION IN RENT BURDEN[c]	SAMPLE SIZE
	At Enrollment[a]	At Two Years[b]		
PITTSBURGH				
ALL HOUSEHOLDS THAT MET MINIMUM STANDARDS REQUIREMENTS AT TWO YEARS				
Minimum Standards households	39%	19%	-20	(85)
Control households	39	32	-6	(78)
DID NOT MEET REQUIREMENTS AT ENROLLMENT				
Minimum Standards households	37	17	-20	(47)
Control households	38	32	-6	(28)
MET REQUIREMENTS AT ENROLLMENT				
Minimum Standards households	42	22	-20	(38)
Control households	39	33	-6	(50)
PHOENIX				
ALL HOUSEHOLDS THAT MET MINIMUM STANDARDS REQUIREMENTS AT TWO YEARS				
Minimum Standards households	41%	20%	-21	(90)
Control households	39	34	-5	(89)
DID NOT MEET REQUIREMENTS AT ENROLLMENT				
Minimum Standards households	39	18	-22	(63)
Control households	40	35	-6	(50)
MET REQUIREMENTS AT ENROLLMENT				
Minimum Standards households	45	27	-18	(27)
Control households	37	34	-3	(39)

SAMPLE: Minimum Standards and Control households active and meeting requirements at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.

DATA SOURCES: Initial and monthly Household Report Forms and payments file.

a. Rent burden at enrollment computed as R/Y, where R = enrollment rent and Y = enrollment income.

b. Rent burden at two years computed as (R-P)/Y, where R = rent at two years after enrollment, P = payment in the two-year unit, and Y = income at two years after enrollment.

c. Percentage points.

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Table 36

MEAN RENT BURDENS AT ENROLLMENT AND TWO YEARS AFTER ENROLLMENT
BY HOUSING REQUIREMENT STATUS FOR MINIMUM RENT LOW HOUSEHOLDS
(Payment as Rent Reduction)
(Friedman and Weinberg, 1979, Table VI-2)

| HOUSEHOLD GROUP | MEAN RENT BURDEN | | MEAN REDUCTION IN RENT BURDEN[c] | SAMPLE SIZE |
	At Enrollment[a]	At Two Years[b]		
PITTSBURGH				
ALL HOUSEHOLDS THAT MET MINIMUM RENT LOW REQUIREMENTS AT TWO YEARS				
Minimum Rent Low households	40%	22%	-18	(101)
Control households	36	11	-4	(217)
DID NOT MEET REQUIREMENTS AT ENROLLMENT				
Minimum Rent Low households	31	18	-14	(27)
Control households	25	29	+4	(46)
MET REQUIREMENTS AT ENROLLMENT				
Minimum Rent Low households	43	23	-19	(74)
Control households	39	32	-7	(171)
PHOENIX				
ALL HOUSEHOLDS THAT MET MINIMUM RENT LOW REQUIREMENTS AT TWO YEARS				
Minimum Rent Low households	41%	21%	-19	(68)
Control households	39	39	-1	(132)
DID NOT MEET REQUIREMENTS AT ENROLLMENT				
Minimum Rent Low households	37	17	-20	(26)
Control households	29	40	+11	(28)
MET REQUIREMENTS AT ENROLLMENT				
Minimum Rent Low households	43	24	-19	(42)
Control households	41	39	-4	(104)

SAMPLE: Minimum Rent Low and Control households active and meeting requirements at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.

DATA SOURCES: Initial and monthly Household Report Forms and payments file.
 a. Rent burden at enrollment computed as R/Y, where R = enrollment rent and Y = enrollment income.
 b. Rent burden at two years computed as (R-P)/Y, where R = rent at two years after enrollment,
P = payment in the two-year unit, and Y = income at two years after enrollment.
 c. Percentage points.

Table 37

MEAN RENT BURDENS AT ENROLLMENT AND TWO YEARS AFTER ENROLLMENT
BY HOUSING REQUIREMENT STATUS FOR MINIMUM RENT HIGH HOUSEHOLDS
(Payment as Rent Reduction)
(Friedman and Weinberg, 1979, Table VI-3)

| | MEAN RENT BURDEN | | MEAN | |
HOUSEHOLD GROUP	At Enrollment[a]	At Two Years[b]	REDUCTION IN RENT BURDEN[c]	SAMPLE SIZE
PITTSBURGH				
ALL HOUSEHOLDS THAT MET MINIMUM RENT HIGH REQUIREMENTS AT TWO YEARS				
Minimum Rent High households	42%	28%	-14	(58)
Control households	40	36	-4	(129)
DID NOT MEET REQUIREMENTS AT ENROLLMENT				
Minimum Rent High households	36	28	-8	(25)
Control households	30	36	+6	(45)
MET REQUIREMENTS AT ENROLLMENT				
Minimum Rent High households	46	27	-18	(33)
Control households	45	35	-10	(84)
PHOENIX				
ALL HOUSEHOLDS THAT MET MINIMUM RENT HIGH REQUIREMENTS AT TWO YEARS				
Minimum Rent High households	42%	24%	-17	(46)
Control households	40	38	-3	(83)
DID NOT MEET REQUIREMENTS AT ENROLLMENT				
Minimum Rent High households	36	22	-14	(28)
Control households	32	40	+8	(28)
MET REQUIREMENTS AT ENROLLMENT				
Minimum Rent High households	50	29	-22	(18)
Control households	44	37	-9	(55)

SAMPLE: Minimum Rent High and Control households active and meeting requirements at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.

DATA SOURCES: Initial and monthly Household Report Forms and payments file.

a. Rent burden at enrollment computed as R/Y, where R = enrollment rent and Y = enrollment income.

b. Rent burden at two years computed as (R-P)/Y, where R = rent at two years after enrollment, P = payment in the two-year unit, and Y = income at two years after enrollment.

c. Percentage points.

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6.5   Market Value (Hedonic Rent)

This section presents figures on the mean estimated market value (hedonic rent) of units occupied by experimental and Control households, similar to the figures on actual unit rents presented in Section 6.3. Merrill (1977) estimated enrollment rents as a function of a variety of unit and neighborhood characteristics. This estimated hedonic equation was then used to estimate average market rents at enrollment and (net of inflation) at two years. Two forms were estimated using rent and the log of rent as dependent variables, respectively. The first four tables present the estimated hedonic coefficients for each form by site, followed by the means and standard deviations of the various unit and neighborhood descriptors.

Table 38

SEMILOG EQUATION: PITTSBURGH

(Merrill, 1977, Table 3-2)

$R^2 = 0.662$ $\overline{R}^2 = 0.654$ $F = 89.140$ $N = 1,583$

VARIABLE DESCRIPTION		COEFFICIENT	t-STATISTIC[a]
Tenure Charac- teristics	Related to landlord (0,1)	-0.102	5.813
	Length of residence (exponential function)	-0.141	11.570
	Landlord lives in the building (0,1)	-0.067	4.376
	Number of persons per room	0.082	5.946
	Number of landlord contacts for maintenance	0.012	3.491
Dwelling Unit Features	Area per room (natural log)	0.170	6.449
	Total number of rooms (natural log)	0.565	29.073
	Building age (years)	-0.002	4.168
	Stove and refrigerator provided (0,1)	0.111	6.382
	Inferior or no heat (0,1)	-0.077	6.403
	Garage provided (0,1)	0.091	4.912
	Offstreet parking provided (0,1)	0.022	1.352
	Overall evaluator rating (4 point scale)	0.053	5.846
	Dishwasher and/or disposal provided (0,1)	0.054	2.692
	Recent interior painting or papering (0,1)	0.052	3.497
	Many high quality features (0,1)	0.038	1.576
	Poor wall and ceiling surface (factor score)	-0.019	4.020
	Poor window condition (factor score)	-0.018	3.697
	Poor bathroom wall and ceiling surface (factor score)	-0.013	2.992
	High quality kitchen (0,1)	0.034	1.982
	Presence of adequate exits (0,1)	0.046	2.709
	Air-conditioning present (0,1)	0.025	1.698
	Presence of adequate ceiling height (0,1)	0.034	2.170
	Adequate kitchen facilities present (0,1)	0.117	2.267
	Large multifamily structure (0,1)	0.038	2.527
	Working condition of plumbing (5 point scale)	0.008	1.539
	Presence of private yard (0,1)	0.015	1.468
Neighborhood Features	Good recreational facilities and access (factor score)	0.024	4.964
	Traffic and litter problems (factor score)	-0.009	1.607
	Problems with crime and public services (factor score)	-0.015	2.926
	Census tracts with higher priced units and higher socioeconomic status	0.032	5.626
	Nonminority census tracts with higher socio- economic status	0.032	5.542
	Blue collar workers and nonminority residents in census tracts	-0.026	5.694
	High quality block face (0,1)	0.043	4.160
CONSTANT		2.629	

SAMPLE: All enrolled households, excluding those that moved between the Baseline Interview and enrollment, those with extreme values for residuals, and those living in a neighborhood with fewer than five enrolled households.

DATA SOURCES: Baseline Interview, Initial Household Report Form, Housing Evaluation Form, 1970 Census of Population.

a. A t-statistic $\geq$ 1.0 indicates significance at the 0.25 level of confidence for a two-tailed test and 0.125 level of confidence for a one-tailed test.

Table 39
LINEAR EQUATION: PITTSBURGH
(Merrill, 1977, Table 3-3)

$R^2 = 0.656$ $\bar{R}^2 = 0.648$ $F = 93.135$ $N = 1,599$

VARIABLE DESCRIPTION		COEFFICIENT	t-STATISTIC[a]
Tenure Characteristics	Related to landlord (0,1)	-11.945	6.132
	Length of residence (exponential function)	-15.036	11.070
	Landlord lives in the building (0,1)	-5.385	3.153
	Number of persons per room	7.651	4.955
	Number of landlord contacts for maintenance	1.073	2.922
Dwelling Unit Features	Area per room (natural log)	19.708	6.789
	Total number of rooms (natural log)	60.020	28.697
	Building age (years)	-0.232	5.202
	Stove and refrigerator provided (0,1)	14.715	7.658
	Inferior or no heat (0,1)	-6.790	5.097
	Garage provided (0,1)	14.379	7.822
	Offstreet parking provided (0,1)	2.837	1.571
	Overall evaluator rating (4 point scale)	5.170	5.187
	Dishwasher and/or disposal provided (0,1)	9.376	4.146
	Recent interior painting or papering (0,1)	6.292	3.801
	Many high quality features (0,1)	8.916	3.311
	Poor wall and ceiling surface (factor score)	-1.670	3.147
	Poor window condition (factor score)	-2.236	4.114
	Poor bathroom wall and ceiling surface (factor score)	-1.627	3.342
	High quality kitchen (0,1)	5.657	2.927
	Presence of adequate exits (0,1)	4.505	2.366
	Air-conditioning present (0,1)	3.171	1.934
	Presence of adequate ceiling height (0,1)	3.038	1.746
	Adequate kitchen facilities present (0,1)	6.575	1.158
	Large multifamily structure (0,1)	3.292	1.986
Neighborhood Features	Good recreational facilities and access (factor score)	2.496	4.706
	Traffic and litter problem (factor score)	-1.112	1.797
	Problems with crime and public services (factor score)	-1.462	2.570
	Census tracts with higher priced units and higher socioeconomic status	3.677	5.890
	Nonminority census tracts with higher socioeconomic status	3.691	5.833
	Blue collar workers and nonminority residents in census tract	-2.722	5.488
	High quality block face (0,1)	5.274	4.643
CONSTANT		-100.782	

SAMPLE: All enrolled households, excluding those that moved between the Baseline Interview and enrollment, those with extreme values for residuals, and those living in a neighborhood with fewer than five enrolled households.

DATA SOURCES: Baseline Interview, Initial Household Report Form, Housing Evaluation Form, 1970 Census of Population.

a. A t-statistic $\geq$ 1.0 indicates significance at the 0.25 level of confidence for a two-tailed test and 0.125 level of confidence for a one-tailed test.

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Table 40

SEMILOG EQUATIONS: PHOENIX
(Merrill, 1977, Table 3-4)

$R^2 = 0.804$ $\bar{R}^2 = 0.801$ $F = 238.060$ $N = 1,593$

VARIABLE DESCRIPTION		COEFFICIENT	t-STATISTIC[a]
Tenure Characteristics	Related to landlord (0,1)	-0.129	7.037
	Length of residence (exponential function)	-0.195	13.508
	Number of persons per room	0.064	6.287
	Number of landlord contacts for maintenance	0.014	4.463
Dwelling Unit Features	Area per room (natural log)	0.310	13.146
	Total number of rooms (natural log)	0.679	34.543
	Building age (years)	-0.002	5.330
	Stove or refrigerator provided (0,1)	0.032	2.549
	Central heat present (0,1)	0.039	2.744
	Garage or carport provided (0,1)	0.031	3.128
	Dishwasher and/or disposal provided (0,1)	0.036	2.486
	Recent interior painting or papering (0,1)	0.015	1.391
	Average surface and structural quality (4 point scale)	0.125	9.571
	Adequate light and ventilation (0,1)	0.035	3.665
	Central air-conditioning present (0,1)	0.050	3.132
	Large multifamily structure (0,1)	0.023	1.674
	Plumbing present (0,1)	0.046	2.507
	Inferior or no heat (0,1)	-0.026	2.049
	Presence of adequate ceiling height (0,1)	0.020	1.279
Neighborhood Features	Overall neighborhood quality (factor score)	0.019	3.284
	Recreational facilities (factor score)	0.016	3.144
	Access to shopping and parking (factor score)	0.013	2.265
	Census tracts with higher priced units and higher socioeconomic status	0.025	3.266
	Owner-occupied, single-family dwelling units in census tract	0.006	1.025
	Poor quality housing in census tracts	-0.029	5.559
	Distance from Central Business District (miles)	-0.004	3.611
	Quality of block face landscaping (4 point scale)	0.021	3.867
CONSTANT		1.902	

SAMPLE: All enrolled households, excluding those that moved between the Baseline Interview and enrollment, those with extreme values for residuals, and those living in a neighborhood with fewer than five enrolled households.

DATA SOURCES: Baseline Interview, Initial Household Report Form, Housing Evaluation Form, 1970 Census of Population.

a. A t-statistic $\geq$ 1.0 indicates significance at the 0.25 level of confidence for a two-tailed test and 0.125 level of confidence for a one-tailed test.

Table 41

LINEAR EQUATION: PHOENIX
(Merrill, 1977, Table 3-5)

$R^2 = 0.786$ $\bar{R}^2 = 0.783$ $F = 240.505$ $N = 1,593$

VARIABLE DESCRIPTION		COEFFICIENT	t-STATISTIC[a]
Tenure Charac- teristics	Related to landlord (0,1)	-15.237	6.544
	Length of residence (exponential function)	-22.758	12.330
	Number of persons per room	7.573	5.871
	Number of landlord contacts for maintenance	1.134	2.887
Dwelling Unit Features	Area per room (natural log)	36.257	12.276
	Total number of rooms (natural log)	79.480	33.024
	Building age (years)	-0.251	4.398
	Stove or refrigerator provided (0,1)	4.338	2.717
	Central heat present (0,1)	8.290	4.650
	Garage or carport provided (0,1)	4.501	3.567
	Dishwasher and/or disposal provided (0,1)	8.750	4.737
	Recent interior painting or papering (0,1)	2.078	1.498
	Average surface and structural quality (4 point scale)	14.298	9.364
	Adequate light and ventilation (0,1)	6.512	5.278
	Central air-conditioning present (0,1)	6.802	3.366
	Large multifamily structure (0,1)	4.195	2.344
Neighborhood Features	Overall neighborhood quality (factor score)	2.294	3.156
	Recreational facilities (factor score)	2.480	3.792
	Access to shopping and parking (factor score)	0.972	1.308
	Census tracts with higher priced units and higher socioeconomic status	3.851	4.024
	Owner-occupied, single-family dwelling units in census tracts	1.567	2.280
	Poor quality housing in census tracts	-2.936	4.469
	Distance from the Central Business District (miles)	-0.530	3.555
	Quality of block face landscaping (4 point scale)	2.681	3.856
CONSTANT		-207.014	

SAMPLE: All enrolled households, excluding those that moved between the Baseline Interview and enrollment, those with extreme values for residuals, and those living in a neighborhood with fewer than five enrolled households.

DATA SOURCES: Baseline Interview, Initial Household Report Form, Housing Evaluation Form, 1970 Census of Population.

a. A t-statistic $\geq$ 1.0 indicates significance at the 0.25 level of confidence for a two-tailed test and 0.125 level of confidence for a one-tailed test.

Table 42

VARIABLE DESCRIPTION	ACRONYM	MEAN	STANDARD DEVIATION
Tenure Characteristics:			
Related to landlord (0,1)	XRELATED	.071	.258
Length of residence (exponential function)	XEXP4	.441	.370
Length of residence (natural log)	XLNLING	3.472	1.112
Landlord lives in the building (0,1)	XLLBLG	.098	.297
Number of persons per room	XOCCRM	.696	.334
Number of landlord contacts for maintenance	XCONTACT	1.337	1.382
Dwelling Unit Features:			
Area per room (natural log)	XLAREAPR	4.847	.181
Total number of rooms (includes kitchen and bath) (natural log)	XLTOTRMS	1.674	.262
Building age (years)	XAGE	49.987	13.912
Stove and refrigerator provided (0,1)	XSTAREF	.109	.312
Stove or refrigerator provided (0,1)	XSTOREF	.169	.375
Inferior or no heat (0,1)	XBADH	.216	.412
Central heat present (0,1)	XCENH	.528	.499
Garage provided (0,1)	XGAR	.064	.244
Offstreet parking provided (0,1)	XOFFSTR	.086	.281
Overall evaluator rating (4 point scale)	XRATINGR	1.780	.642
Dishwasher and/or disposal provided (0,1)	XAPPL	.054	.227
Recent interior painting or papering (0,1)	XPAINT	.100	.300
Average surface and structural quality (4 point scale)	XQUAL2	2.171	.366
Many high quality features (0,1)	XFANCY2	.040	.197
Poor wall and ceiling surface (factor score)	XF2SUR	.010	1.052
Poor window condition (factor score)	XF4WIN	.008	.986
Poor bathroom wall and ceiling surface (factor score)	XF6BSUR	.0003	1.070
Adequate light and ventilation (0,1)	XHLIVER	.413	.493
Presence of adequate ceiling height (0,1)	XHCEHTR	.908	.288
High quality kitchen (0,1)	XKITCHQK	.081	.273
Presence of adequate exits (0,1)	XHADQEXR	.922	.269
Air-conditioning present (0,1)	XACPITT	.111	.314
Large multifamily structure (0,1)	XMULTI5	.139	.346
Adequate kitchen facilities present (0,1)	XKITCHP	.992	.087
Working condition of plumbing (5 point scale)	XPLUMW	3.575	.888
Plumbing present (0,1)	XPLUMP	.887	.317
Adequate plumbing present and working (0,1)	XHPLUMR	.830	.376
Presence of private yard (0,1)	XYARD	.367	.482
Parking facilities provided (0,1)	XPARK	.148	.355
Temperature control: central heat or air-conditioning (0,1)	XTEMP	.576	.494
Neighborhood Features:			
Good recreational facilities and access (factor score)	XCNHF11	-.003	.993
Traffic and litter problems (factor score)	XCNHF13	-.0005	.961
Problems with crime and public services (factor score)	XCNHF14	-.011	.935
Census tracts with higher priced units and higher socio-economic status (factor score)	XCENFO2	-.032	.956
Nonminority census tracts with higher socioeconomic status (factor score)	XCENFO3	.022	.981
Blue collar workers and nonminority residents in census tracts (factor score)	XCENFO4	-.015	1.000
Census tracts with higher socioeconomic status (factor score)	XCTFO2	.009	.929
Census tracts with newer, higher priced units (factor score)	XCTFO3	-.032	.892
Median income of census tract (dollars)	XCTMDINC	8502.807	1623.467
Quality of adult recreation facilities	XHCNAREC	1.417	.296
High quality block face (0,1)	XFANCYN	.372	.484
Distance from Central Business District (miles)	XDIST	5.480	3.724
Quality block face landscaping (4 point scale)	XLNDSCPR	1.375	.934
Rent:			
Analytic rent	XACRA61H	111.052	32.396
Natural logarithm of analytic rent	XLACR61H	4.667	.293

SAMPLE: All enrolled households, excluding those that moved between the Baseline Interview and enrollment, those with extreme values for residuals, and those living in a neighborhood with fewer than five enrolled households.

DATA SOURCES: Baseline Interview, Initial Household Report Form, Housing Evaluation Form, 1970 Census of Population.

Table 42 (continued)

PHOENIX

VARIABLE DESCRIPTION	ACRONYM	MEAN	STANDARD DEVIATION
Tenure Characteristics:			
Related to landlord (0,1)	XRELATED	.058	.233
Length of residence (exponential function)	XEXP366	.280	.319
Length of residence (natural log)	XLNLING	2.743	1.022
Landlord lives in the building (0,1)	XLLBLG	.096	.295
Number of persons per room	XOCCRM	.840	.467
Number of landlord contacts for maintenance	XCONTACT	1.269	1.383
Dwelling Unit Features:			
Area per room (natural log)	XLAREAPR	4.688	.199
Total number of rooms (includes kitchen & bath) (natural log)	XLTOTRMS	1.592	.252
Building age (years)	XAGE	24.447	15.170
Stove and refrigerator provided (0,1)	XSTAREF	.640	.480
Stove or refrigerator provided (0,1)	XSTOREF	.793	.405
Inferior or no heat (0,1)	XBADH	.314	.464
Central heat present (0,1)	XCENH	.326	.469
Garage provided (0,1)	XGAR	.044	.207
Garage or carport provided (0,1)	XCARGAR	.315	.465
Offstreet parking provided (0,1)	XOFFSTR	.512	.500
Overall evaluator rating (4 point scale)	XRATINGR	1.946	.927
Dishwasher and/or disposal provided (0,1)	XAPPL	.159	.366
Recent interior painting or papering (0,1)	XPAINT	.203	.402
Average surface and structural quality (4 point scale)	XQUAL2	2.285	.633
Many high quality features (0,1)	XFANCY2	.126	.332
Adequate light and ventilation (0,1)	XHLIVER	.389	.488
Presence of adequate ceiling height (0,1)	XHCEHTR	.906	.292
High quality kitchen (0,1)	XKITCHOK	.212	.409
Presence of adequate exits (0,1)	XHADQEXR	.991	.094
Central air-conditioning present (0,1)	XCACPHX	.244	.430
Large multifamily structure (0,1)	XMULTI5	.146	.353
Adequate kitchen facilities present (0,1)	XKITCHP	.977	.149
Working condition of plumbing (5 point scale)	XPLUMW	3.568	.859
Plumbing present (0,1)	XPLUMP	.920	.271
Adequate plumbing present and working (0,1)	XHPLUMR	.838	.369
Presence of private yard (0,1)	XYARD	.522	.500
Parking facilities provided (0,1)	XPARK	.312	.463
Temperature control: central heat or air-conditioning (0,1)	XTEMP	.344	.475
Neighborhood Features:			
Overall neighborhood quality (factor score)	XCNHF11	.002	1.002
Recreational facilities (factor score)	XCNHF12	.024	.987
Access to shopping and parking (factor score)	XCNHF14	.007	.998
Census tracts with higher priced units and higher socio-economic status (factor score)	XCENF01	.012	.994
Owner-occupied single-family dwelling units in census tract (factor score)	XCENF02	-.016	.992
Poor quality housing in census tract (factor score)	XCENF03	.002	.973
Census tracts with higher priced units and higher socio-economic status (factor score)	XCTF01	.006	1.060
Owner-occupied single-family dwelling units in census tract (factor score)	XCTF02	-.026	1.031
Poor quality housing in census tract (factor score)	XCTF03	-.006	1.474
Median income of census tract (dollars)	XCTMDINC	8072.137	2148.115
Quality of adult recreation facilities	XHCNAREC	1.597	.274
High quality block face (0,1)	XFANCYN	.504	.500
Distance from Central Business District (miles)	XDIST	5.382	4.290
Quality block face landscaping (4 point scale)	XLNDSCPR	1.697	.821
Rent:			
Analytic rent	XACRA61H	132.544	45.545
Natural logarithm of analytic rent	XLACR61H	4.822	.372

SAMPLE: All enrolled households, excluding those that moved between the Baseline Interview and enrollment, those with extreme values for residuals, and those living in a neighborhood with fewer than five enrolled households.

DATA SOURCES: Baseline Interview, Initial Household Report Form, Housing Evaluation Form, 1970 Census of Population.

TABLE 43

CHANGE IN HEDONIC HOUSING SERVICES INDEX
FROM ENROLLMENT TO TWO YEARS
FOR CONTROL AND PERCENT OF RENT HOUSEHOLDS
(Friedman and Weinberg, 1978, Table X-35)

| | MEAN HEDONIC INDEX | | MEAN CHANGE IN INDEX | | | |
| | | | | PERCENTAGE | | |
TREATMENT GROUP	At Enrollment	At Two Years	AMOUNT	Mean of Ratio	Ratio of Means	SAMPLE SIZE
			PITTSBURGH			
All Percent of Rent households	$114	$121	$ 7	9%	6%	(353)
Percentage rebate:						
20%	107	116	9	9	8	(58)
30%	114	119	5	6	4	(80)
40%	116	123	7	9	6	(100)
50%	116	123	7	8	6	(90)
60%	115	127	12	16	10	(25)
Control households	114	120	5	6	4	(273)
Unconstrained households	106	116	11	12	10	(52)
			PHOENIX			
All Percent of Rent households	132	149	17	16	13	(241)
Percentage rebate:						
20%	135	150	15	20	11	(36)
30%	130	142	12	11	9	(71)
40%	135	153	19	15	14	(54)
50%	136	153	17	14	13	(65)
60%	[110]	[141]	[31]	[37]	[28]	(15)
Control households	128	144	16	17	13	(231)
Unconstrained households	132	158	26	34	20	(34)

SAMPLE: Percent of Rent and Control households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.

DATA SOURCES: Initial and monthly Household Report Forms, Housing Evaluation Forms, 1970 Census of Population, and Baseline and Third Periodic Interviews.

NOTE: Brackets indicate entries based on 15 or fewer observations.

TABLE 44

CHANGES IN HEDONIC HOUSING SERVICES INDEX
FROM ENROLLMENT TO TWO YEARS FOR CONTROL AND
PERCENT OF RENT HOUSEHOLDS FOR THE MOVER SAMPLE
(Friedman and Weinberg, 1978, Table X-36)

| TREATMENT GROUP | MEAN HEDONIX INDEX | | MEAN CHANGE IN INDEX | | | SAMPLE SIZE |
| | At Enrollment | At Two Years | AMOUNT | PERCENTAGE | | |
				Mean of Ratio	Ratio of Means	
			PITTSBURGH			
All Percent of Rent households	$111	$128	$17	19%	15%	(121)
Percentage rebate:						
20%	[106]	[121]	[15]	[17]	[14]	(12)
30%	112	124	12	15	11	(30)
40%	114	130	17	19	15	(41)
50%	112	130	18	18	16	(29)
60%	[103]	[130]	[27]	[40]	[26]	(9)
Control households	114	126	12	13	11	(92)
Unconstrained households	105	131	27	31	26	(19)
			PHOENIX			
All Percent of Rent households	133	157	24	22	18	(134)
Percentage rebate:						
20%	127	146	18	29	14	(19)
30%	138	159	21	17	15	(38)
40%	138	165	27	20	20	(30)
50%	135	157	22	18	16	(42)
60%	[106]	[147]	[41]	[49]	[39]	(10)
Control households	126	155	30	32	24	(109)
Unconstrained households	125	166	41	50	33	(18)

SAMPLE: Percent of Rent and Control movers active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.

DATA SOURCES: Initial and monthly Household Report Forms, Housing Evaluation Forms, 1970 Census of Population, and Baseline and Third Periodic Interviews.

NOTE: Brackets indicate entries based on 15 or fewer observations.

Table 45

CHANGES IN HOUSING SERVICES FROM ENROLLMENT TO TWO YEARS AFTER ENROLLMENT
BY TREATMENT TYPE (MINIMUM STANDARDS REQUIREMENTS): ALL HOUSEHOLDS

(Friedman and Weinberg, 1979, Table V-10)

HOUSEHOLD GROUP	HOUSING SERVICES		CHANGE IN SERVICES			SAMPLE SIZE
	AT ENROLL-MENT	AT TWO YEARS	AMOUNT	PERCENTAGE MEAN OF RATIO	RATIO OF MEANS	
PITTSBURGH						
ALL HOUSEHOLDS						
Minimum Standards households	$110	$116	$ 6	0.07	0.06	(179)
Control households	114	120	5	0.06	0.04	(273)
Unconstrained households	106	116	11	0.12	0.10	(52)
HOUSEHOLDS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Standards households	120	128	8	0.09	0.07	(82)
Control households	129	135	6	0.06	0.05	(78)
Unconstrained households	.[119]	[129]	[10]	[0.11]	[0.08]	(14)
Did Not Meet at Enrollment						
Minimum Standards households	113	127	15	0.15	0.13	(45)
Control households	121	132	12	0.14	0.10	(27)
Unconstrained households	[100]	[125]	[25]	[0.27]	[0.25]	(6)
Met at Enrollment						
Minimum Standards households	127	128	1	0.01	0.01	(37)
Control households	133	136	3	0.02	0.02	(51)
Unconstrained households	[133]	[132]	[-1]	[-0.00]	[-0.01]	(8)
HOUSEHOLDS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Standards households	101	106	4	0.06	0.04	(97)
Control households	109	114	5	0.05	0.05	(195)
Unconstrained households	101	112	11.	0.13	0.01	(38)
Did Not Meet at Enrollment						
Minimum Standards households	101	105	4	0.05	0.05	(94)
Control households	108	113	5	0.05	0.05	(189)
Unconstrained households	101	112	11	0.13	0.11	(38)
Met at Enrollment						
Minimum Standards households	[117]	[130]	[14]	[0.12]	[0.12]	(3)
Control households	[130]	[131]	[1]	[0.03]	[0.01]	(6)
Unconstrained households	—	—	—	—	—	(0)
PHOENIX						
ALL HOUSEHOLDS						
Minimum Standards households	$128	$146	$18	0.17	0.14	(128)
Control households	129	145	16	0.16	0.12	(229)
Unconstrained households	135	161	26	0.31	0.19	(33)
HOUSEHOLDS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Standards households	136	162	26	0.23	0.19	(72)
Control households	143	166	23	0.24	0.16	(83)
Unconstrained households	151	178	27	0.31	0.17	(17)
Did Not Meet at Enrollment						
Minimum Standards households	130	160	31	0.29	0.24	(51)
Control households	132	171	39	0.41	0.30	(47)
Unconstrained households	[133]	[179]	[46]	[0.57]	[0.35]	(9)
Met at Enrollment						
Minimum Standards households	153	166	14	0.10	0.09	(21)
Control households	158	158	1	0.01	0.01	(36)
Unconstrained households	[171]	[177]	[5]	[0.03]	[0.03]	(8)
HOUSEHOLDS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Standards households	118	126	8	0.08	0.07	(56)
Control households	121	133	12	0.12	0.10	(146)
Unconstrained households	117	142	25	0.30	0.21	(16)
Did Not Meet at Enrollment						
Minimum Standards households	112	122	9	0.10	0.08	(51)
Control households	119	131	12	0.12	0.10	(141)
Unconstrained households	[113]	[137]	[25]	[0.31]	[0.22]	(15)
Met at Enrollment						
Minimum Standards households	[169]	[160]	[-8]	[-0.05]	[-0.05]	(5)
Control households	[163]	[183]	[19]	[0.12]	[0.17]	(5)
Unconstrained households	[185]	[216]	[32]	[0.17]	[0.17]	(1)

SAMPLE: Minimum Standards, Control, and Unconstrained households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.

DATA SOURCES: Initial and monthly Household Report Forms, Housing Evaluation Forms, 1970 Census of Population, Baseline and Periodic Interviews, and payments file.

NOTE: Brackets indicate amounts based on 15 or fewer observations.

Table 46

CHANGES IN HOUSING SERVICES FROM ENROLLMENT TO TWO YEARS AFTER ENROLLMENT
BY TREATMENT TYPE (MINIMUM RENT LOW REQUIREMENTS): ALL HOUSEHOLDS
(Friedman and Weinberg, 1979, Table V-11)

| | HOUSING SERVICES | | CHANGE IN SERVICES | | | |
| | | | | PERCENTAGE | | |
HOUSEHOLD GROUP	AT ENROLL-MENT	AT TWO YEARS	AMOUNT	MEAN OF RATIO	RATIO OF MEANS	SAMPLE SIZE
PITTSBURGH						
ALL HOUSEHOLDS						
Minimum Rent Low households	$110	$115	$5	0.06	0.05	(106)
Control households	114	120	5	0.06	0.04	(273)
Unconstrained households	106	116	11	0.13	0.12	(52)
HOUSEHOLDS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Rent Low households	113	118	5	0.06	0.04	(89)
Control households	121	127	6	0.07	0.05	(200)
Unconstrained households	113	125	13	0.15	0.12	(38)
Did Not Meet at Enrollment						
Minimum Rent Low households	104	114	10	0.11	0.10	(21)
Control households	103	117	14	0.17	0.14	(42)
Unconstrained households	[104]	[124]	[19]	[0.19]	[0.18]	(9)
Met at Enrollment						
Minimum Rent Low households	116	120	4	0.05	0.03	(68)
Control households	125	130	4	0.04	0.03	(158)
Unconstrained households	115	126	11	0.14	0.10	(29)
HOUSEHOLDS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Rent Low households	95	97	2	0.06	0.02	(17)
Control households	97	99	2	0.02	0.02	(73)
Unconstrained households	[87]	[92]	[5]	[0.06]	[0.06]	(14)
Did Not Meet at Enrollment						
Minimum Rent Low households	95	97	2	0.06	0.02	(17)
Control households	96	98	2	0.02	0.02	(67)
Unconstrained households	[87]	[92]	[5]	[0.06]	[0.06]	(14)
Met at Enrollment						
Minimum Rent Low households	--	--	--	--	--	(0)
Control households	[108]	[112]	[4]	[0.04]	[0.04]	(6)
Unconstrained households	--	--	--	--	--	(0)
PHOENIX						
ALL HOUSEHOLDS						
Minimum Rent Low households	$126	$148	$23	0.21	0.18	(74)
Control households	129	145	16	0.16	0.12	(229)
Unconstrained households	135	161	26	0.31	0.19	(33)
HOUSEHOLDS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Rent Low households	134	161	27	0.24	0.20	(55)
Control households	148	168	20	0.19	0.14	(114)
Unconstrained households	148	178	30	0.34	0.20	(23)
Did Not Meet at Enrollment						
Minimum Rent Low households	110	150	40	0.41	0.36	(20)
Control households	106	159	53	0.59	0.50	(27)
Unconstrained households	[117]	[180]	[63]	[0.84]	[0.54]	(7)
Met at Enrollment						
Minimum Rent Low households	148	167	19	0.15	0.13	(35)
Control households	161	171	10	0.07	0.06	(87)
Unconstrained households	162	178	16	0.12	0.10	(16)
HOUSEHOLDS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Rent Low households	100	112	11	0.12	0.11	(19)
Control households	110	121	11	0.13	0.10	(115)
Unconstrained households	[103]	[120]	[17]	[0.24]	[0.17]	(10)
Did Not Meet at Enrollment						
Minimum Rent Low households	98	109	11	0.12	0.11	(17)
Control households	106	119	12	0.14	0.11	(109)
Unconstrained households	[98]	[121]	[23]	[0.30]	[0.23]	(9)
Met at Enrollment						
Minimum Rent Low households	[116]	[134]	[18]	[0.15]	[0.16]	(2)
Control households	[174]	[169]	[-5]	[0.02]	[0.03]	(6)
Unconstrained households	[154]	[112]	[-41]	[-0.27]	[-0.27]	(6)

SAMPLE: Minimum Rent Low, Control, and Unconstrained households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.
DATA SOURCES: Initial and monthly Household Report Forms, Housing Evaluation Forms, 1970 Census of Population, Baseline and Periodic Interviews, and payments file.
NOTE: Brackets indicate amounts based on 15 or fewer observations.

(Friedman and Weinberg, 1979, Table V-12)

HOUSEHOLD GROUP	HOUSING SERVICES AT ENROLL-MENT	HOUSING SERVICES AT TWO YEARS	CHANGE IN SERVICES AMOUNT	PERCENTAGE MEAN OF RATIO	PERCENTAGE RATIO OF MEANS	SAMPLE SIZE
PITTSBURGH						
ALL HOUSEHOLDS						
Minimum Rent High households	$113	$118	$ 5	0.05	0.04	(101)
Control households	114	120	5	0.06	0.04	(273)
Unconstrained households	106	116	11	0.12	0.10	(52)
HOUSEHOLDS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Rent High households	122	129	7	0.07	0.06	(55)
Control households	127	136	8	0.08	0.06	(119)
Unconstrained households	118	133	16	0.19	0.14	(24)
Did Not Meet at Enrollment						
Minimum Rent High household	109	124	14	0.13	0.13	(24)
Control households	111	126	15	0.15	0.14	(40)
Unconstrained households	[104]	[133]	[29]	[0.35]	[0.28]	(11)
Met at Enrollment						
Minimum Rent High households	132	133	1	0.02	0.01	(31)
Control households	135	140	5	0.04	0.04	(79)
Unconstrained households	[129]	[133]	[4]	[0.05]	[0.03]	(13)
HOUSEHOLDS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Rent High households	102	105	3	0.04	0.03	(46)
Control households	104	107	3	0.04	0.03	(154)
Unconstrained households	96	102	6	0.07	0.07	(28)
Did Not Meet at Enrollment						
Minimum Rent High households	102	105	3	0.04	0.03	(46)
Control households	104	107	3	0.04	0.03	(151)
Unconstrained households	96	101	5	0.06	0.05	(26)
Met at Enrollment						
Minimum Rent High households	--	--	--	--	--	--
Control households	[139]	[139]	[0]	[0.02]	[0.00]	(3)
Unconstrained households	[87]	[110]	[23]	[0.28]	[0.26]	(2)
PHOENIX						
ALL HOUSEHOLDS						
Minimum Rent High households	$131	$151	$19	0.17	0.15	(83)
Control households	129	145	16	0.16	0.12	(229)
Unconstrained households	135	161	26	0.31	0.19	(33)
HOUSEHOLDS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Rent High households	142	176	34	0.29	0.24	(42)
Control households	159	179	20	0.19	0.13	(71)
Unconstrained households	[152]	[178]	[26]	[0.26]	[0.17]	(15)
Did Not Meet at Enrollment						
Minimum Rent High households	127	174	48	0.41	0.38	(24)
Control households	127	172	45	0.47	0.35	(22)
Unconstrained households	[127]	[171]	[44]	[0.46]	[0.35]	(8)
Met at Enrollment						
Minimum Rent High households	164	179	15	0.11	0.09	(17)
Control households	174	182	9	0.06	0.05	(49)
Unconstrained households	[181]	[187]	[7]	[0.03]	[0.04]	(7)
HOUSEHOLDS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Rent High households	121	124	4	0.05	0.03	(41)
Control households	115	129	14	0.15	0.12	(158)
Unconstrained households	120	146	26	0.35	0.22	(18)
Did Not Meet at Enrollment						
Minimum Rent High households	119	125	5	0.06	0.04	(40)
Control households	114	128	14	0.15	0.12	(156)
Unconstrained households	118	148	30	0.38	0.25	(17)
Met at Enrollment						
Minimum Rent High households	[169]	[107]	[-63]	[-0.37]	[-0.37]	(1)
Control households	[165]	[186]	[21]	[0.13]	[0.13]	(2)
Unconstrained households	[154]	[112]	[-41]	[-0.27]	[-0.27]	(1)

SAMPLE: Minimum Rent High, Control, and Unconstrained households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.

DATA SOURCES: Initial and monthly household Report Forms, Housing Evaluation Forms, 1970 Census of Population, Baseline and Periodic Interviews, and payments file.

NOTE: Brackets indicate amounts based on 15 or fewer observations.

Table 48

CHANGES IN HOUSING SERVICES FROM ENROLLMENT TO TWO YEARS AFTER ENROLLMENT
BY TREATMENT TYPE (MINIMUM STANDARDS REQUIREMENTS): ALL STAYERS

(Friedman and Weinberg, 1979, Table V-13)

HOUSEHOLD GROUP	HOUSING SERVICES		CHANGE IN SERVICES			SAMPLE SIZE
	AT ENROLL-MENT	AT TWO YEARS	AMOUNT	PERCENTAGE MEAN OF RATIO	RATIO OF MEANS	
PITTSBURGH						
ALL STAYERS						
Minimum Standards households	$112	$113	$1	0.01	0.01	(112)
Control households	114	116	2	0.02	0.02	(181)
Unconstrained households	106	108	2	0.01	0.02	(33)
STAYERS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Standards households	124	125	1	0.02	0.01	(51)
Control households	129	131	1	0.01	0.01	(59)
Unconstrained households	[123]	[126]	[3]	[0.03]	[0.02]	(9)
Did Not Meet at Enrollment						
Minimum Standards households	116	122	6	0.05	0.05	(20)
Control households	128	127	-1	-0.01	-0.01	(16)
Unconstrained households	[98]	[106]	[8]	[0.08]	[0.08]	(2)
Met at Enrollment						
Minimum Standards households	128	126	-2	-0.01	-0.02	(31)
Control households	130	132	2	0.01	0.02	(43)
Unconstrained households	[130]	[131]	[1]	[0.01]	[0.01]	(7)
STAYERS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Standards households	102	103	1	0.01	0.01	(61)
Control households	107	110	2	0.02	0.02	(122)
Unconstrained households	100	101	1	0.01	0.01	(24)
Did Not Meet at Enrollment						
Minimum Standards households	102	103	1	0.01	0.01	(61)
Control households	107	110	2	0.02	0.02	(122)
Unconstrained households	100	101	1	0.01	0.01	(24)
Met at Enrollment						
Minimum Standards households	--	--	--	--	--	(0)
Control households	--	--	--	--	--	(0)
Unconstrained	--	--	--	--	--	(0)
PHOENIX						
ALL STAYERS						
Minimum Standards households	$129	$136	$7	0.06	0.05	(63)
Control households	131	135	4	0.04	0.03	(121)
Unconstrained households	[146]	[154]	[9]	[0.07]	[0.06]	(15)
STAYERS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Standards households	144	152	8	0.06	0.06	(32)
Control households	152	156	4	0.03	0.02	(41)
Unconstrained households	[167]	[172]	[5]	[0.03]	[0.03]	(9)
Did Not Meet at Enrollment						
Minimum Standards households	138	145	7	0.06	0.05	(20)
Control households	[153]	[160]	[8]	[0.06]	[0.05]	(14)
Unconstrained households	[165]	[177]	[12]	[0.08]	[0.07]	(3)
Met at Enrollment						
Minimum Standards households	[155]	[164]	[10]	[0.07]	[0.06]	(12)
Control households	152	153	2	0.02	0.01	(27)
Unconstrained households	[168]	[170]	[1]	[0.01]	[0.01]	(6)
STAYERS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Standards households	112	119	7	0.07	0.06	(31)
Control households	120	124	4	0.04	0.03	(80)
Unconstrained households	[114]	[128]	[14]	[0.13]	[0.12]	(6)
Did Not Meet at Enrollment						
Minimum Standards households	112	119	7	0.07	0.06	(31)
Control households	120	124	4	0.04	0.03	(80)
Unconstrained households	[114]	[128]	[14]	[0.13]	[0.12]	(6)
Met at Enrollment						
Minimum Standards households	--	--	--	--	--	(0)
Control households	--	--	--	--	--	(0)
Unconstrained households	--	--	--	--	--	(0)

SAMPLE: Minimum Standards, Control, and Unconstrained households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.
DATA SOURCES: Initial and monthly Household Report Forms, Housing Evaluation Forms, 1970 Census of Population, Baseline and Periodic Interviews, and payments file.
NOTE: Brackets indicate amounts based on 15 or fewer observations.

Table 49

CHANGES IN HOUSING SERVICES FROM ENROLLMENT TO TWO YEARS AFTER ENROLLMENT
BY TREATMENT TYPE (MINIMUM RENT LOW REQUIREMENTS): ALL STAYERS
(Friedman and Weinberg, 1979, Table V-14)

HOUSEHOLD GROUP	HOUSING SERVICES		CHANGE IN SERVICES			SAMPLE SIZE
	AT ENROLL-MENT	AT TWO YEARS	AMOUNT	PERCENTAGE MEAN OF RATIO	PERCENTAGE RATIO OF MEANS	
PITTSBURGH						
ALL STAYERS						
Minimum Rent Low households	$112	$113	$1	0.02	0.01	(72)
Control households	114	116	2	0.02	0.02	(181)
Unconstrained households	106	108	2	0.01	0.02	(33)
STAYERS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Rent Low households	115	117	2	0.02	0.02	(57)
Control households	122	125	2	0.02	0.02	(123)
Unconstrained households	116	117	1	0.01	0.01	(21)
Did Not Meet at Enrollment						
Minimum Rent Low households	[113]	[111]	[-2]	[-0.01]	[-0.02]	(11)
Control households	[110]	[112]	[2]	[0.02]	[0.03]	(14)
Unconstrained households	[97]	[105]	[8]	[0.09]	[0.08]	(4)
Met at Enrollment						
Minimum Rent Low households	116	119	2	0.03	0.02	(46)
Control households	124	126	2	0.02	0.02	(109)
Unconstrained households	120	120	-1	-0.01	-0.01	(17)
STAYERS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Rent Low households	98	98	-1	0.00	0.01	(15)
Control households	98	99	1	0.01	0.01	(58)
Unconstrained households	[89]	[91]	[2]	[0.02]	[0.02]	(12)
Did Not Meet at Enrollment						
Minimum Rent Low households	[98]	[98]	[-1]	[0.00]	[-0.01]	(15)
Control households	98	99	1	0.01	0.01	(58)
Unconstrained households	[89]	[91]	[2]	[0.02]	[0.02]	(12)
Met at Enrollment						
Minimum Rent Low households	--	--	--	--	--	(0)
Control households	--	--	--	--	--	(0)
Unconstrained	--	--	--	--	--	(0)
PHOENIX						
ALL STAYERS						
Minimum Rent Low households	$124	$132	$8	0.08	0.06	(32)
Control households	131	135	4	0.04	0.03	(121)
Unconstrained households	[146]	[154]	[9]	[0.07]	[0.06]	(15)
STAYERS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Rent Low households	145	154	9	0.06	0.06	(18)
Control households	161	164	3	0.02	0.02	(52)
Unconstrained households	[171]	[176]	[5]	[0.03]	[0.03]	(9)
Did Not Meet at Enrollment						
Minimum Rent Low households	[106]	[115]	[9]	[0.08]	[0.08]	(2)
Control households	[111]	[116]	[5]	[0.05]	[0.05]	(3)
Unconstrained households	[211]	[234]	[23]	[0.11]	[0.11]	(1)
Met at Enrollment						
Minimum Rent Low households	150	159	9	0.06	0.06	(16)
Control households	164	167	3	0.02	0.02	(49)
Unconstrained households	[166]	[169]	[3]	[0.02]	[0.02]	(8)
STAYERS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Rent Low households	[97]	[104]	[7]	[0.09]	[0.07]	(14)
Control households	108	113	4	0.05	0.04	(69)
Unconstrained households	[107]	[122]	[14]	[0.14]	[0.13]	(6)
Did Not Meet at Enrollment						
Minimum Rent Low households	[97]	[104]	[7]	[0.09]	[0.07]	(14)
Control households	108	112	4	0.05	0.04	(69)
Unconstrained households	[108]	[122]	[14]	[0.14]	[0.13]	(6)
Met at Enrollment						
Minimum Rent Low households	--	--	--	--	--	(0)
Control households	--	--	--	--	--	(0)
Unconstrained households	--	--	--	--	--	(0)

SAMPLE: Minimum Rent Low, Control, and Unconstrained households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.

DATA SOURCES: Initial and monthly Household Report Forms, Housing Evaluation Forms, 1970 Census of Population, Baseline and Periodic Interviews, and payments file.

NOTE: Brackets indicate amounts based on 15 or fewer observations.

Table 50

CHANGES IN HOUSING SERVICES FROM ENROLLMENT TO TWO YEARS AFTER ENROLLMENT
BY TREATMENT TYPE (MINIMUM RENT HIGH REQUIREMENTS): ALL STAYERS
(Friedman and Weinberg, 1979, Table V-15)

HOUSEHOLD GROUP	HOUSING SERVICES		CHANGE IN SERVICES			SAMPLE SIZE
	AT ENROLL-MENT	AT TWO YEARS	AMOUNT	PERCENTAGE		
				MEAN OF RATIO	RATIO OF MEANS	
PITTSBURGH						
ALL STAYERS						
Minimum Rent High households	$113	$114	$1	0.02	0.01	(67)
Control households	114	116	2	0.02	0.02	(181)
Unconstrained households	106	108	2	0.01	0.02	(33)
STAYERS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Rent High households	129	127	-2	-0.01	-0.01	(29)
Control households	131	134	3	0.03	0.02	(67)
Unconstrained households	[125]	[124]	[-1]	[-0.01]	[-0.01]	(11)
Did Not Meet at Enrollment						
Minimum Rent High households	[113]	[115]	[1]	[0.01]	[0.01]	(8)
Control households	120	126	5	0.05	0.04	(18)
Unconstrained households	[116]	[114]	[-3]	[-0.02]	[-0.02]	(3)
Met at Enrollment						
Minimum Rent High households	134	132	-3	-0.01	-0.02	(21)
Control households	135	137	2	0.02	0.02	(49)
Unconstrained households	[129]	[128]	[-1]	[-0.01]	[-0.01]	(8)
STAYERS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Rent High households	101	104	3	0.04	0.03	(38)
Control households	105	106	1	0.01	0.01	(114)
Unconstrained households	97	100	3	0.03	0.03	(22)
Did Not Meet at Enrollment						
Minimum Rent High households	101	104	3	0.04	0.03	(38)
Control households	105	106	1	0.01	0.01	(114)
Unconstrained households	97	100	3	0.03	0.03	(22)
Met at Enrollment						
Minimum Rent High households	—	—	—	—	—	(0)
Control households	—	—	—	—	—	(0)
Unconstrained	—	—	—	—	—	(0)
PHOENIX						
ALL STAYERS						
Minimum Rent High households	$131	$139	$8	0.08	0.06	(31)
Control households	131	135	4	0.04	0.03	(121)
Unconstrained households	[146]	[154]	[9]	[0.07]	[0.06]	(15)
STAYERS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Rent High households	[170]	[177]	[7]	[0.04]	[0.05]	(7)
Control households	171	174	3	0.02	0.08	(35)
Unconstrained households	[170]	[174]	[3]	[0.02]	[0.08]	(6)
Did Not Meet at Enrollment						
Minimum Rent High households	—	—	—	—	—	(0)
Control households	[151]	[150]	[-1]	[0.00]	[-0.01]	(5)
Unconstrained households	[120]	[136]	[16]	[0.14]	[[0.13]	(1)
Met at Enrollment						
Minimum Rent High households	[170]	[177]	[7]	[0.04]	[0.04]	(7)
Control households	174	178	4	0.03	0.02	(30)
Unconstrained households	[180]	[181]	[1]	[0.00]	[0.01]	(5)
STAYERS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Rent High households	120	128	9	0.09	0.08	(24)
Control households	114	118	4	0.04	0.04	(86)
Unconstrained households	[129]	[142]	[12]	[0.10]	[0.09]	(8)
Did Not Meet at Enrollment						
Minimum Rent High households	120	128	9	0.09	0.08	(24)
Control households	114	118	4	0.04	0.04	(86)
Unconstrained households	[129]	[142]	[12]	[0.10]	[0.09]	(9)
Met at Enrollment						
Minimum Rent High households	—	—	—	—	—	(0)
Control households	—	—	—	—	—	(0)
Unconstrained households	—	—	—	—	—	(0)

SAMPLE: Minimum Rent High, Control, and Unconstrained households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.

DATA SOURCES: Initial and monthly Household Report Forms, Housing Evaluation Forms, 1970 Census of Population, Baseline and Periodic Interviews, and payments file.

NOTE: Brackets indicate amounts based on 15 or fewer observations.

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Table 51

CHANGES IN HOUSING SERVICES FROM ENROLLMENT TO TWO YEARS AFTER ENROLLMENT
BY TREATMENT TYPE (MINIMUM STANDARDS REQUIREMENTS): ALL MOVERS

(Friedman and Weinberg, 1979, Table V-16)

HOUSEHOLD GROUP	HOUSING SERVICES AT ENROLL-MENT	HOUSING SERVICES AT TWO YEARS	CHANGE IN SERVICES AMOUNT	PERCENTAGE MEAN OF RATIO	PERCENTAGE RATIO OF MEANS	SAMPLE SIZE
PITTSBURGH						
ALL MOVERS						
Minimum Standards households	$106	$121	$15	0.17	0.14	(67)
Control households	114	126	12	0.13	0.11	(92)
Unconstrained households	105	131	27	0.31	0.26	(191)
MOVERS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Standards households	112	132	20	0.21	0.12	(31)
Control households	127	148	21	0.23	0.17	(19)
Unconstrained households	[111]	[135]	[24]	[0.27]	[0.22]	(5)
Did Not Meet at Enrollment						
Minimum Standards households	110	132	22	0.24	0.20	(25)
Control households	[110]	[140]	[30]	[0.35]	[0.27]	(11)
Unconstrained households	[101]	[135]	[34]	[0.36]	[0.34]	(4)
Met at Enrollment						
Minimum Standards households	[121]	[135]	[14]	[0.11]	[0.12]	(6)
Control households	[150]	[159]	[9]	[0.06]	[0.06]	(8)
Unconstrained households	[150]	[136]	[-14]	[-0.09]	[-0.09]	(1)
MOVERS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Standards households	100	111	10	0.14	0.10	(36)
Control households	111	120	9	0.10	0.08	(73)
Unconstrained households	[103]	[130]	[27]	[0.33]	[0.26]	(14)
Did Not Meet at Enrollment						
Minimum Standards households	99	109	10	0.14	0.10	(33)
Control households	109	119	10	0.11	0.09	(67)
Unconstrained households	[103]	[130]	[27]	[0.33]	[0.26]	(14)
Met at Enrollment						
Minimum Standards households	[117]	[130]	[14]	[0.12]	[0.12]	(3)
Control households	[130]	[131]	[1]	[0.03]	[0.01]	(6)
Unconstrained households	—	—	—	—	—	(0)
PHOENIX						
ALL MOVERS						
Minimum Standards households	$128	$156	$28	0.27	0.22	(65)
Control households	127	156	29	0.30	0.23	(108)
Unconstrained households	125	166	41	0.50	0.33	(18)
MOVERS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Standards households	130	170	40	0.37	0.31	(40)
Control households	134	175	41	0.44	0.31	(42)
Unconstrained households	[133]	[185]	[52]	[0.64]	[0.39]	(8)
Did Not Meet at Enrollment						
Minimum Standards households	124	170	46	0.44	0.37	(31)
Control households	123	176	53	0.56	0.43	(33)
Unconstrained households	[117]	[180]	[63]	[0.82]	[0.54]	(6)
Met at Enrollment						
Minimum Standards households	[150]	[169]	[19]	[0.14]	[0.12]	(9)
Control households	[175]	[173]	[-2]	[-0.00]	[-0.01]	(9)
Unconstrained households	[181]	[198]	[17]	[0.09]	[0.09]	(2)
MOVERS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Standards households	125	134	9	0.12	0.07	(25)
Control households	122	144	22	0.21	0.18	(66)
Unconstrained households	[119]	[151]	[32]	[0.40]	[0.27]	(10)
Did Not Meet at Enrollment						
Minimum Standards households	114	127	13	0.16	0.11	(20)
Control households	118	140	22	0.22	0.19	(61)
Unconstrained households	[112]	[144]	[32]	[0.42]	[0.29]	(9)
Met at Enrollment						
Minimum Standards households	[169]	[160]	[-8]	[-0.05]	[-0.05]	(5)
Control households	[163]	[183]	[19]	[0.12]	[0.12]	(5)
Unconstrained households	[185]	[216]	[32]	[0.17]	[0.17]	(1)

SAMPLE: Minimum Standards, Control, and Unconstrained households active at two years after enrollment, exluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.

DATA SOURCES: Initial and monthly Household Report Forms, Housing Evaluation Forms, 1970 Census of Population, Baseline and Periodic Interviews, and payments file.

NOTE: Brackets indicate amounts based on 15 or fewer observations.

Table 52

CHANGES IN HOUSING SERVICES FROM ENROLLMENT TO TWO YEARS AFTER ENROLLMENT
BY TREATMENT TYPE (MINIMUM RENT LOW REQUIREMENTS): ALL MOVERS

(Friedman and Weinberg, 1979, Table V-17)

HOUSEHOLD GROUP	HOUSING SERVICES		CHANGE IN SERVICES			
	AT ENROLL-MENT	AT TWO YEARS	AMOUNT	PERCENTAGE MEAN OF RATIO	RATIO OF MEANS	SAMPLE SIZE
PITTSBURGH						
ALL MOVERS						
Minimum Rent Low households	$106	$119	$13	0.15	0.12	(34)
Control households	114	126	12	0.13	0.11	(92)
Unconstrained households	105	131	27	0.31	0.26	(19)
MOVERS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Rent Low households	108	121	12	0.13	0.11	(32)
Control households	118	131	13	0.14	0.11	(77)
Unconstrained households	108	135	27	0.32	0.25	(17)
Did Not Meet at Enrollment						
Minimum Rent Low households	[94]	[116]	[22]	[0.24]	[0.23]	(10)
Control households	99	120	21	0.24	0.21	(28)
Unconstrained households	[110]	[138]	[28]	[0.26]	[0.25]	(5)
Met at Enrollment						
Minimum Rent Low households	115	123	8	0.08	0.07	(22)
Control households	129	137	8	0.08	0.06	(49)
Unconstrained households	[107]	[134]	[27]	[0.34]	[0.25]	(12)
MOVERS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Rent Low households	[72]	[92]	[20]	[0.50]	[0.28]	(2)
Control households	[95]	[101]	[6]	[0.07]	[0.06]	(15)
Unconstrained households	[76]	[98]	[22]	[0.29]	[0.29]	(2)
Did Not Meet at Enrollment						
Minimum Rent Low households	[72]	[92]	[20]	[0.50]	[0.28]	(2)
Control households	[87]	[94]	[7]	[0.09]	[0.08]	(9)
Unconstrained households	[76]	[98]	[22]	[0.29]	[0.29]	(2)
Met at Enrollment						
Minimum Rent Low households	--	--	--	--	--	(0)
Control households	[108]	[112]	[4]	[0.04]	[0.04]	(6)
Unconstrained households	--	--	--	--	--	(0)
PHOENIX						
ALL MOVERS						
Minimum Rent Low households	$127	$160	$34	0.31	0.27	(42)
Control households	127	156	29	0.30	0.23	(108)
Unconstrained households	125	166	41	0.50	0.33	(18)
MOVERS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Rent Low households	129	164	35	0.33	0.27	(37)
Control households	137	172	35	0.34	0.26	(62)
Unconstrained households	[133]	[180]	[46]	[0.53]	[0.35]	(14)
Did Not Meet at Enrollment						
Minimum Rent Low households	111	154	44	0.44	0.40	(18)
Control households	105	165	59	0.65	0.56	(24)
Unconstrained households	[101]	[171]	[70]	[0.96]	[0.69]	(6)
Met at Enrollment						
Minimum Rent Low households	147	174	27	0.22	0.18	(19)
Control households	157	177	19	0.14	0.12	(38)
Unconstrained households	[158]	[186]	[29]	[0.21]	[0.18]	(8)
MOVERS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Rent Low households	[109]	[132]	[23]	[0.22]	[0.21]	(5)
Control households	112	134	22	0.25	0.20	(46)
Unconstrained households	[97]	[118]	[21]	[0.40]	[0.22]	(4)
Did Not Meet at Enrollment						
Minimum Rent Low households	[104]	[131]	[27]	[0.27]	[0.26]	(3)
Control households	103	129	26	0.29	0.25	(40)
Unconstrained households	[78]	[120]	[42]	[0.63]	[0.54]	(3)
Met at Enrollment						
Minimum Rent Low households	[116]	[134]	[18]	[0.15]	[0.16]	(2)
Control households	[174]	[169]	[-5]	[-0.02]	[-0.03]	(6)
Unconstrained households	[154]	[112]	[-41]	[-0.27]	[-0.27]	(1)

SAMPLE: Minimum Rent Low, Control, and Unconstrained households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.

DATA SOURCES: Initial and monthly Household Report Forms, Housing Evaluation Forms, 1970 Census of Population, Baseline and Periodic Interviews, and payments file.

NOTE: Brackets indicate amounts based on 15 or fewer observations.

Table 53

CHANGES IN HOUSING SERVICES FROM ENROLLMENT TO TWO YEARS AFTER ENROLLMENT
BY TREATMENT TYPE (MINIMUM RENT HIGH REQUIREMENTS): ALL MOVERS
(Friedman and Weinberg, 1979, Table V-18)

HOUSEHOLD GROUP	HOUSING SERVICES AT ENROLL- MENT	AT TWO YEARS	CHANGE IN SERVICES AMOUNT	PERCENTAGE MEAN OF RATIO	RATIO OF MEANS	SAMPLE SIZE
PITTSBURGH						
ALL MOVERS						
Minimum Rent High households	$113	$125	$12	0.12	0.11	(34)
Control households	114	126	12	0.13	0.11	(92)
Unconstrained households	105	131	27	0.31	0.26	(19)
MOVERS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Rent High households	115	130	16	0.15	0.14	(26)
Control households	122	137	15	0.15	0.12	(52)
Unconstrained households	[111]	[141]	[30]	[0.36]	[0.27]	(13)
Did Not Meet at Enrollment						
Minimum Rent High households	107	128	21	0.20	0.20	(16)
Control households	104	127	23	0.24	0.22	(22)
Unconstrained households	[99]	[140]	[41]	[0.49]	[0.41]	(8)
Met at Enrollment						
Minimum Rent High households	[127]	[134]	[7]	[0.07]	[0.06]	(10)
Control households	136	145	9	0.08	0.07	(30)
Unconstrained households	[131]	[143]	[12]	[0.14]	[0.09]	(5)
MOVERS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Rent High households	[107]	[106]	[-1]	[0.00]	[-0.01]	(8)
Control households	104	111	8	0.10	0.08	(40)
Unconstrained households	[91]	[110]	[19]	[0.23]	[0.21]	(6)
Did Not Meet at Enrollment						
Minimum Rent High households	[107]	[106]	[-1]	[0.00]	[-0.01]	(8)
Control households	101	109	8	0.11	0.08	(37)
Unconstrained households	[93]	[110]	[17]	[0.20]	[0.18]	(4)
Met at Enrollment						
Minimum Rent High households	--	--	--	--	--	(0)
Control households	[139]	[139]	[0]	[0.02]	[0.00]	(3)
Unconstrained households	[87]	[110]	[23]	[0.28]	[0.26]	(2)
PHOENIX						
ALL MOVERS						
Minimum Rent High households	$132	$157	$26	0.23	0.20	(52)
Control households	127	156	29	0.30	0.23	(108)
Unconstrained households	125	166	41	0.50	0.33	(18)
MOVERS THAT MET REQUIREMENTS AT TWO YEARS						
Minimum Rent High households	136	176	40	0.34	0.29	(35)
Control households	148	184	36	0.34	0.24	(36)
Unconstrained households	[140]	[182]	[42]	[0.42]	[0.30]	(9)
Did Not Meet at Enrollment						
Minimum Rent High households	127	174	48	0.41	0.38	(25)
Control households	120	178	58	0.61	0.48	(17)
Unconstrained households	[128]	[176]	[48]	[0.50]	[0.38]	(7)
Met at Enrollment						
Minimum Rent High households	[160]	[181]	[20]	[0.15]	[0.13]	(10)
Control households	173	189	16	0.11	0.09	(19)
Unconstrained households	[181]	[202]	[21]	[0.12]	[0.01]	(2)
MOVERS THAT DID NOT MEET REQUIREMENTS AT TWO YEARS						
Minimum Rent High households	122	119	-3	0.00	-0.02	(17)
Control households	116	142	26	0.28	0.22	(72)
Unconstrained households	[111]	[150]	[40]	[0.59]	[0.36]	(9)
Did Not Meet at Enrollment						
Minimum Rent High households	119	120	1	0.02	0.01	(16)
Control households	114	141	26	0.29	0.23	(70)
Unconstrained households	[105]	[155]	[50]	[0.70]	[0.48]	(8)
Met at Enrollment						
Minimum Rent High households	[169]	[107]	[-63]	[-0.37]	[-0.37]	(1)
Control households	[165]	[186]	[21]	[0.13]	[0.13]	(2)
Unconstrained households	[154]	[112]	[-41]	[-0.27]	[-0.27]	(1)

SAMPLE: Minimum Rent High, Control, Unconstrained households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits and those living in their own homes or in subsidized housing.

DATA SOURCES: Initial and monthly Household Report Forms, Housing Evaluation Forms, 1970 Census of Population, Baseline and Periodic Interviews, and payments file.

NOTE: Brackets indicate amounts based on 15 or fewer observations.

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6.6   Location

This section summarizes locational changes in terms of three characterizations of the Census tracts in which households lived, based on 1970 Census data--(1) the percent of households in the tract with incomes less than $5,000; (2) the percent of households in the Census tract whose head of household was black; and (3) for Phoenix, the percent of households in the Census tract whose head of household was Spanish American.

Table 54

MEAN CHANGE IN LOW-INCOME CONCENTRATION
(Atkinson et al., 1979, Table 2-3)

LOW-INCOME CONCENTRATION	PITTSBURGH		PHOENIX	
	EXPERIMENTAL HOUSEHOLDS	CONTROL HOUSEHOLDS	EXPERIMENTAL HOUSEHOLDS	CONTROL HOUSEHOLDS
Mean initial concentration (standard deviation)	35.4% (13.2)	33.9% (12.8)	39.0% (15.2)	39.8% (15.3)
Mean final concentration (standard deviation)	34.4 (13.2)	32.7 (13.2)	36.3 (15.7)	36.5 (15.7)
Mean change (standard deviation)	-1.1 (8.1)	-1.2 (7.2)	-2.7 (11.3)	-3.3 (11.0)
SAMPLE SIZE	(916)	(320)	(715)	(282)

SAMPLE: Experimental and Control households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits, and those living in their own homes and in subsidized housing.

DATA SOURCES: 1970 Census of Population and Housing (Fourth Count Tapes), Baseline and Periodic Interviews, and Initial and monthly Household Report Forms.

NOTE: Experimental/Control differences not significant at the 0.05 level in a two-tailed t-test.

Table 55
CHANGES IN LOW-INCOME HOUSEHOLD CONCENTRATION
UNDER THE HOUSING GAP PLAN
(Atkinson et al., 1979, Table 2-4)

HOUSEHOLDS	ALL HOUSEHOLDS		HOUSEHOLDS THAT MOVED	
	HOUSING GAP	CONTROL	HOUSING GAP	CONTROL

PITTSBURGH

ALL HOUSING GAP HOUSEHOLDS

	HOUSING GAP	CONTROL	HOUSING GAP	CONTROL
Initial low-income concentration	35.5%	33.9%	36.6%	34.6%
(Sample size)	(449)	(321)	(167)	(112)
Change in concentration	-0.5	-1.2	-1.4	-3.5
Percentage of households that moved	37.0	35.0	---	---

HOUSING GAP HOUSEHOLDS INITIALLY FAILING REQUIREMENTS

Initial low-income concentration	37.7	36.7	38.6	37.2
(Sample size)	(289)	(200)	(115)	(69)
Change in concentration	-0.8	-1.3	-2.1	-3.8
Percentage of households that moved	40.0	35.0	---	---

HOUSING GAP HOUSEHOLDS INITIALLY PASSING REQUIREMENTS

Initial low-income concentration	31.6	29.1	32.2	29.7
(Sample size)	(157)	(119)	(52)	(42)
Change in concentration	0.1	-0.9	0.2	-2.7
Percentage of households that moved	33.0	35.0	---	---

PHOENIX

ALL HOUSING GAP HOUSEHOLDS

Initial low-income concentration	38.5%	39.8%	38.6%	39.2%
(Sample size)	(381)	(282)	(237)	(148)
Change in concentration	-2.8	-3.3	-4.6	-6.3
Percentage of households that moved	62.0	52.0	---	---

HOUSING GAP HOUSEHOLDS INITIALLY FAILING REQUIREMENTS

Initial low-income concentration	41.3	43.5	41.0	43.3
(Sample size)	(277)	(192)	(173)	(98)
Change in concentration	-3.2	-3.6	-5.1	-7.0
Percentage of households that moved	62.0	51.0	---	---

HOUSING GAP HOUSEHOLDS INITIALLY PASSING REQUIREMENTS

Initial low-income concentration	30.8	31.5	31.7	30.4
(Sample size)	(101)	(86)	(62)	(47)
Change in concentration	-1.7	-2.9	-2.7	-5.4
Percentage of households that moved	61.0	55.0	---	---

SAMPLE: Housing Gap and Control households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits, and those living in their own homes and in subsidized housing.

DATA SOURCES: 1970 Census of Population and Housing (Fourth County Tapes), Baseline and Periodic Interviews, Initial and monthly Household Report Forms, and payments file.

NOTE: Housing Gap/Control differences not significant at the 0.05 level in a two-tailed t-test.

Table 56

CHANGES IN LOW-INCOME HOUSEHOLD CONCENTRATION
UNDER THE UNCONSTRAINED PLAN
(Atkinson et al., 1979, Table 2-5)

	ALL HOUSEHOLDS		HOUSEHOLDS THAT MOVED	
	Unconstrained	Control	Unconstrained	Control
PITTSBURGH				
Initial low-income concentration (Sample size)	38.7% (63)	33.9%* (321)	41.9% (25)	34.6%* (112)
Change in concentration	-4.5	-1.2	-11.3	-3.5
Percentage of households that moved	40.0%	35.0%	---	---
PHOENIX				
Initial low-income concentration (Sample size)	40.6% (40)	39.8% (282)	39.3% (23)	39.3% (148)
Change in concentration	-3.9	-3.3	-6.8	-6.4
Percentage of households that moved	58.0%	52.0%	---	---

SAMPLE: Unconstrained and Control households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits, and those living in their own homes and in subsidized housing.

DATA SOURCES: 1970 Census of Population and Housing (Fourth Count Tapes), Baseline and Periodic Interviews, and Initial and monthly Household Report Forms.

*t-statistic shows Unconstrained/Control difference significant at the 0.05 level in a two-tailed test.

Table 57

CHANGES IN LOW-INCOME HOUSEHOLD CONCENTRATION
UNDER THE PERCENT OF RENT PLAN
(Atkinson et al., 1979, Table 2-6)

	ALL HOUSEHOLDS		HOUSEHOLDS THAT MOVED	
	Percent of Rent	Control	Percent of Rent	Control
PITTSBURGH				
Initial low-income concentration	34.8%	33.9%	35.2%	34.6%
(Sample size)	(406)	(321)	(153)	(112)
Change in concentration	-1.2	-1.2	-3.1	-3.5
Percentage of households that moved	38.0%	35.0%	---	---
PHOENIX				
Initial low-income concentration	39.4%	39.8%	39.2%	39.3%
(Sample size)	(298)	(282)	(182)	(148)
Change in concentration	-2.4	-3.3	-4.0	-6.4
Percentage of households that moved	61.0%	52.0%	---	---

SAMPLE: Percent of Rent and Control households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits, and those living in their own homes and in subsidized housing.

DATA SOURCES: 1970 Census of Population and Housing (Fourth Count Tapes), Baseline and Periodic Interviews, and Initial and monthly Household Report Forms.

NOTE: Percent of Rent/Control differences not significant at the 0.05 level in a two-tailed t-test.

Table 58

MEAN PERCENTAGE BLACK IN INITIAL TRACTS
OF ENROLLED HOUSEHOLDS BY RACE AND TREATMENT GROUP
(Atkinson et al., 1979, Table 3-1)

TREATMENT TYPE	RACIAL/ETHNIC GROUP		
	Black	White	Spanish American
PITTSBURGH			
Control households	47.1%	5.6%	--
Standard deviation	31.0	12.3	
(Sample size)	(63)	(255)	
Percent of Rent households	63.2	5.3	--
Standard deviation	31.0	12.3	
(Sample size)	(87)	(317)	
Housing Gap households	53.7	6.7	--
Standard deviation	30.8	13.3	
(Sample size)	(124)	(383)	
Total households	55.2	5.9	--
Standard deviation	31.4	12.8	
(Sample size)	(274)	(955)	
PHOENIX			
Control households	31.8%	4.1%	9.0%
Standard deviation	23.8	10.2	14.1
(Sample size)	(27)	(180)	(69)
Percent of Rent households	42.5	2.0	7.1
Standard deviation	26.1	5.6	9.8
(Sample size)	(26)	(190)	(76)
Housing Gap households	42.3	2.8	9.7
Standard deviation	21.3	8.3	17.3
(Sample size)	(26)	(250)	(132)
Total households	38.7	2.9	8.8
Standard deviation	24.0	8.2	14.8
(Sample size)	(79)	(620)	(277)

SAMPLE: Experimental and Control households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits, and those living in their own homes and in subsidized housing.

DATA SOURCES: 1970 Census of Population and Housing (Fourth Count Tapes), Baseline Interviews, and Initial Household Report Forms.

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Table 59

MEAN CHANGE IN BLACK CONCENTRATION
FOR EXPERIMENTAL AND CONTROL HOUSEHOLDS
(Atkinson et al., 1979, Table 3-3)

TREATMENT TYPE	BLACK HOUSEHOLDS	WHITE HOUSEHOLDS	SPANISH AMERICAN HOUSEHOLDS	TOTAL
PITTSBURGH				
Experimental households	-4.0	-0.6	—	-1.4
Standard deviation	23.2	7.5		13.0
(Sample size)	(211)	(698)		(909)
Control households	2.6	-0.3	—	0.3
Standard deviation	16.8	7.1		9.8
(Sample size)	(63)	(254)		(317)
PHOENIX				
Experimental households	-2.6	-0.1	-1.7	-0.8
Standard deviation	23.8	7.5	14.1	11.7
(Sample size)	(52)	(438)	(207)	(697)
Control households	3.1	-1.5	-1.9	-1.1
Standard deviation	26.3	8.5	7.7	11.3
(Sample size)	(27)	(180)	(69)	(276)

SAMPLE: Experimental and Control households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits, and those living in their own homes and in subsidized housing.

DATA SOURCES: 1970 Census of Population and Housing (Fourth Count Tapes), Baseline and Periodic Interviews, and Initial and monthly Household Report Forms.

NOTE: Experimental/Control differences not significant at the 0.05 level in a two-tailed t-test.

Table 60

MEAN CHANGES IN BLACK CONCENTRATION FOR WHITE AND
BLACK HOUSEHOLDS BY TREATMENT GROUP AND MOBILITY STATUS
(Atkinson et al., 1979, Table 3-4)

	WHITE HOUSEHOLDS			BLACK HOUSEHOLDS		
HOUSEHOLD GROUP	MEAN INITIAL CONCENTRATION	MEAN CHANGE IN CONCENTRATION	SAMPLE SIZE	MEAN INITIAL CONCENTRATION	MEAN CHANGE IN CONCENTRATION	SAMPLE SIZE
PITTSBURGH						
ALL HOUSEHOLDS						
Control households	5.6%	-0.3	(254)	47.1%	2.6	(63)
Housing Gap households	6.7	-0.7	(382)	53.7	-1.5	(124)
Percent of Rent households	5.3	-0.4	(317)	63.2**	-7.6**	(87)
TOTAL	5.9	-0.5	(952)	55.2	-2.5	(274)
HOUSEHOLDS THAT MOVED						
Control households	6.2	-1.0	(89)	42.2	7.7	(21)
Housing Gap households	6.8	-1.9	(141)	51.9	-3.7	(49)
Percent of Rent households	5.6	-1.1	(127)	65.8**	-25.3**	(26)
TOTAL	6.2	-1.4	(357)	53.5	-7.1	(96)
PHOENIX						
ALL HOUSEHOLDS						
Control households	4.1	-1.5	(180)	31.8	3.1	(27)
Housing Gap households	2.8	-0.4	(248)	42.3	-5.9	(26)
Percent of Rent households	2.0	0.4	(190)	42.5	0.7	(26)
TOTAL	2.9	-0.5	(618)	38.7	-0.6	(79)
HOUSEHOLDS THAT MOVED						
Control households	4.7	-3.0	(92)	30.2	4.1	(20)
Housing Gap households	2.5	-0.7	(144)	39.6	-4.3	(19)
Percent of Rent households	2.0	0.6	(116)	40.8	1.2	(16)
TOTAL	2.9	-0.9	(352)	36.5	-0.9	(55)

SAMPLE: Black and white Experimental and Control households active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits, and those living in their own homes and in subsidized housing.

DATA SOURCES: 1970 Census of Population and Housing (Fourth Count Tapes), Baseline and Periodic Interviews, and Initial and monthly Household Report Forms.

** Significantly different from Control households at the 0.01 level.

Table 61

MEAN PERCENTAGE SPANISH AMERICAN
IN INITIAL TRACTS OF ENROLLED HOUSEHOLDS
(Atkinson et al., 1979, Table 4-1)

TREATMENT TYPE	RACIAL/ETHNIC GROUP		
	Spanish American	White	Black
Control households	44.7%	17.4%	35.8%
Standard deviation	24	16	16
(Sample size)	(69)	(180)	(27)
Housing Gap households	38.0	16.7	33.2
Standard deviation	27	16	13
(Sample size)	(132)	(250)	(26)
Percent of Rent households	43.6	16.1	34.0
Standard deviation	24	15	19
(Sample size)	(76)	(190)	(26)
Total households	41.2	16.7	34.3
Standard deviation	26	16	16
(Sample size)	(277)	(620)	((79)

SAMPLE: Experimental and Control households in Phoenix active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits, and those living in their own homes and in subsidized housing.

DATA SOURCES: 1970 Census of Population and Housing (Fourth Count Tapes), Baseline Interviews, and Initial Household Report Forms.

Table 62

MEAN CHANGES IN SPANISH AMERICAN CONCENTRATION
FOR EXPERIMENTAL AND CONTROL HOUSEHOLDS
(Atkinson et al., 1979, Table 4-3)

TREATMENT TYPE	SPANISH AMERICAN HOUSEHOLDS	WHITE HOUSEHOLDS	BLACK HOUSEHOLDS
Experimental households	-4.0	-0.8	-2.1
Standard deviation	19.7	10.5	12.7
(Sample size)	(207)	(438)	(52)
Control households	-4.8	-1.6	-0.9
Standard deviation	16.9	7.6	14.0
(Sample size)	(69)	(180)	(27)

SAMPLE: Experimental and Control households in Phoenix active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits, and those living in their own homes and in subsidized housing.

DATA SOURCES: 1970 Census of Population and Housing (Fourth Count Tapes), Baseline and Periodic Interviews, and Initial and monthly Household Report Forms.

NOTE: Experimental/Control differences not significant at the 0.05 level in a two-tailed t-test.

Table 63

MEAN DECONCENTRATION FOR SPANISH AMERICAN, WHITE,
AND BLACK HOUSEHOLDS BY TREATMENT GROUP AND MOBILITY STATUS
(Atkinson et al., 1979, Table 4-4)

	SPANISH AMERICAN HOUSEHOLDS			WHITE HOUSEHOLDS			BLACK HOUSEHOLDS		
HOUSEHOLD GROUP	Mean Initial Concentration	Mean Change in Concentration	Sample Size	Mean Initial Concentration	Mean Change in Concentration	Sample Size	Mean Initial Concentration	Mean Change in Concentration	Sample Size
ALL HOUSEHOLDS									
Control households	44.7	-4.7	(69)	17.4	-1.6	(180)	35.8	-0.9	(27)
Housing Gap households	38.0	-6.1	(132)	16.7	-1.1	(250)	33.2	-1.8	(26)
Percent of Rent households	43.4	-0.3	(16)	16.1	-0.5	(190)	34.0	-2.4	(26)
TOTAL	41.2	-4.2	(277)	16.7	-1.0	(620)	34.3	-1.7	(79)
HOUSEHOLDS THAT MOVED									
Control households	42.8	-10.3	(32)	16.3	-3.1	(92)	35.9	-1.3	(20)
Housing Gap households	36.9	-9.2	(87)	15.9	-1.9	(146)	32.5	-2.5	(19)
Percent of Rent households	38.7	-0.5	(46)	17.0	-0.8	(116)	33.3	-3.9	(16)
TOTAL	38.5	-7.0	(165)	16.4	-1.8	(354)	33.9	-2.5	(55)

SAMPLE: Experimental and Control households in Phoenix active at two years after enrollment, excluding those with enrollment incomes over the eligibility limits, and those living in their own homes and in subsidized housing.
DATA SOURCES: 1970 Census of Population and Housing (Fourth Count Tapes), Baseline and Periodic Interviews, and Initial and monthly Household Report Forms.

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6.7   Program Comparisons

This section presents information on mean rents, compliance with physical
and occupancy standards, location, and program costs for Minimum Standards
recipients two years after enrollment and for samples of participants in
other housing programs (conventional Public Housing, Section 23, and Section
236).

Table 64

MEAN ESTIMATED RENTAL VALUE OF UNITS
(INCLUDING THE VALUE OF LANDLORD-SUPPLIED
STOVE AND REFRIGERATOR, WHERE PRESENT)[a]
(Figure 3-2)
(Kennedy, 1980, Table II-5)

	PITTSBURGH		PHOENIX	
	MEAN VALUE	RATIO TO MINIMUM STANDARDS VALUE	MEAN VALUE	RATIO TO MINIMUM STANDARDS VALUE
Unconstrained	130	0.92	156	0.95
Percent of Rent	134	0.94	149	0.91
Minimum Rent Low	131	0.92	159	0.97
Minimum Rent High	140	0.99	173	1.05
Minimum Standards	142	1.00	164	1.00
Section 23	145	1.02	151	0.92
Public Housing	134	0.94	158	0.96
Section 236	143	1.01	181	1.10
Controls	132	0.93	144	0.88

SAMPLE: Units occupied by sampled participants in each program.

a. Hedonic values in this table have not been inflated to 1975 and are therefore based on 1973 rent levels. Inflation to 1975 would not, of course, affect the relative program values shown in Figure 3-2.

Table 65

TENANT BENEFITS
(Market Rent Minus Tenant Contribution in Dollars Per Month)
(Mayo et al., 1979, Part 1, Table 3-5)

PROGRAM TYPE	PITTSBURGH			PHOENIX		
	BENEFIT	STANDARD DEVIATION	SAMPLE SIZE	BENEFIT	STANDARD DEVIATION	SAMPLE SIZE
Public Housing	$79	29	(236)	$114	32	(136)[a]
Section 23	52*	29	(93)	103	46	(143)
Section 236	28*	43	(276)	72*	45	(85)
Housing Allowances	77	39	(83)	107	55	(68)

SAMPLES: Comparison Program households--a sample of households participating in the Public Housing, Section 23, and Section 236 programs in Allegheny and Maricopa counties. Housing Allowance households--Housing Gap Minimum Standards households active and receiving full payments at two years after enrollment in the Demand Experiment.

DATA SOURCES: Program Comparison, Baseline, and Third Periodic Interviews, Housing Evaluation Forms, Household Report Forms, 1970 Census of Housing, and Payments File.

a. Weighted average of sample sizes in the elderly and nonelderly strata in Phoenix Public Housing; see Appendix II for a description of the calculation of statistics based on this sample.

* Significantly different from Housing allowances at the 0.05 level.

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Figure 31

PERCENTAGE OF UNITS THAT FAIL
ALTERNATIVE HOUSING QUALITY STANDARDS
(PITTSBURGH)
(Mayo et al., 1979, Part 1, Figure 4-1)

Figure 32

PERCENTAGE OF UNITS THAT FAIL
ALTERNATIVE HOUSING QUALITY STANDARDS
(PHOENIX)

(Mayo et al., 1979, Part 1, Figure 4-2)

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Table 66

MEASURES OF CROWDING FOR ALL PROGRAMS

(Mayo et al., 1979, Part 1, Table 4-9)

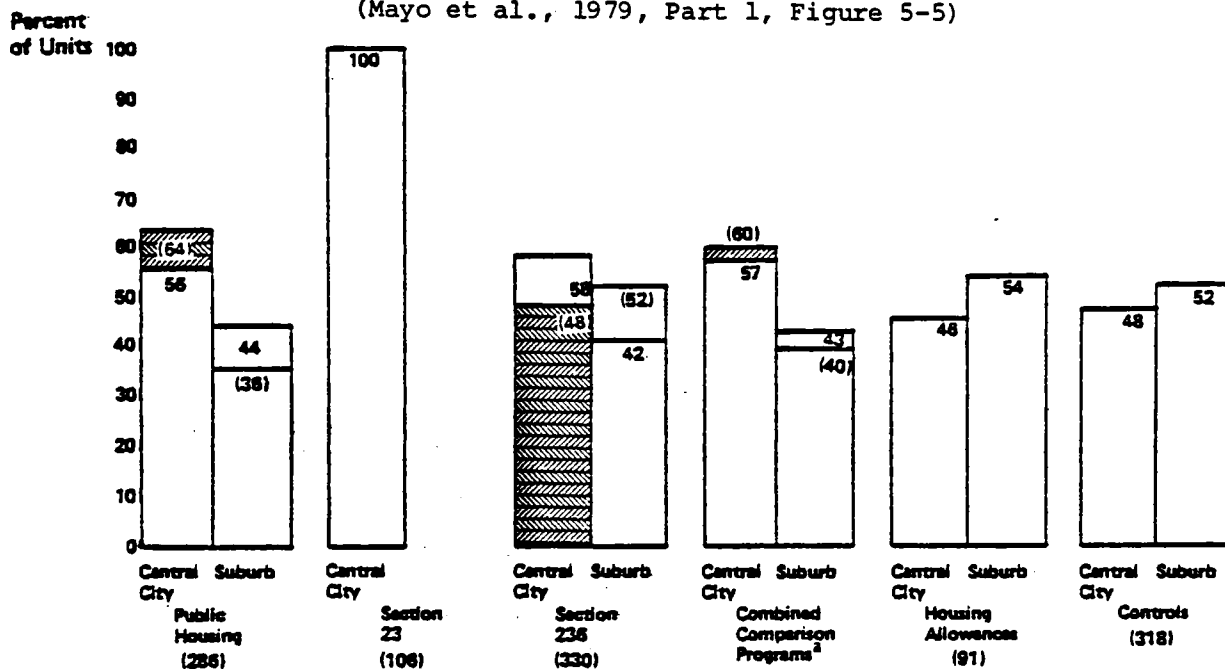|	PITTSBURGH						PHOENIX					
	PUBLIC HOUSING	SECTION 23	SECTION 236	COM-PARISON PROGRAMS	HOUSING ALLOWANCE	CONTROLS	PUBLIC HOUSING	SECTION 23	SECTION 236	COM-PARISON PROGRAMS	HOUSING ALLOWANCE	CONTROLS
1. Average Number of Persons Per:												
a. Bedroom	1.26	1.76	1.26	1.27	1.49	1.94	1.55	1.23	1.21	1.33	1.33	1.90
b. Room	0.61	0.90	0.53	0.59	0.61	0.70	0.77	0.50	0.49	0.59	0.58	0.76
2. Proportion Crowded												
a. More Than Two Persons Per Bedroom	0.03	0.25	0.03	0.03	0.11	0.26	0.07	0.06	0.01	0.03	0.05	0.22
b. More Than One Person Per Room	0.07	0.16	0.02	0.06	0.06	0.05	0.13	0.04	0.02	0.06	0.02	0.15
SAMPLE SIZE	(241)	(94)	(281)	(616)[a]	(89)	(307)	(225)	(145)	(87)	(457)[a]	(89)	(273)

SAMPLES: Comparison Program households--a sample of households participating in the Public Housing, Section 23, and Section 236 programs in Allegheny and Maricopa counties. Housing Allowance households--Housing Gap Minimum Standards households active and receiving full payments at two years after enrollment in the Demand Experiment. Control households active at two years after enrollment in the Demand Experiment.

DATA SOURCES: Program Comparison and Third Periodic Interviews, Housing Evaluation Forms, Household Report Forms.

a. Weighted averages for Comparison Programs are based on proportional representation of each program in the study (not the sampled) population, weights are 0.681, 0.013, and 0.300 in Pittsburgh and 0.349, 0.071, and 0.580 in Phoenix for Public Housing, Section 23, and Section 236, respectively.

Table 67
MEDIAN RENT BURDENS AND PERCENTAGES OF HOUSEHOLDS
WITH RENT BURDENS IN EXCESS OF 25 PERCENT
(Mayo et al., 1979, Part 1, Table 4-11)

| | PITTSBURGH | | | | | | PHOENIX | | | | | |
	PUBLIC HOUSING	SECTION 23	SECTION 236 WITH RS[a]	SECTION 236 WITHOUT RS[a]	HOUSING ALLOWANCES	CONTROLS	PUBLIC HOUSING	SECTION 23	SECTION 236 WITH RS[a]	SECTION 236 WITHOUT RS[a]	HOUSING ALLOWANCES	CONTROLS
Median Rent Burden	19.6%	16.3%	22.8%	33.3%	20.5%	27.4%	20.6%	24.7%	22.1%	37.5%	21.4%	31.1%
Percentage with Rent Burden in Excess of 25 Percent	13.4	8.6	34.8	74.3	31.7	56.0	22.6	45.1	29.0	89.3	37.6	71.6
SAMPLE SIZE	(253)	(93)	(222)	(66)	(82)	(291)	(217)	(144)	(59)	(31)	(85)	(236)

SAMPLES: Comparison Program households--a sample of households participating in Public Housing, Section 23, and Section 236 programs in Allegheny and Maricopa counties. Housing Allowance households--Housing Gap Minimum Standards households active and receiving full payments at two years after enrollment in the Demand Experiment. Control households active at two years after enrollment in the Demand Experiment.

DATA SOURCES: Program Comparison and Third Periodic Interviews, Housing Evaluation Forms, Household Report Forms, and Payments File.

a. RS = Rent Supplement.

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Figure 33

DISTRIBUTION OF UNITS BETWEEN CENTRAL CITY AND SUBURB BY PROGRAM
PITTSBURGH (ALLEGHENY COUNTY)
(Mayo et al., 1979, Part 1, Figure 5-5)
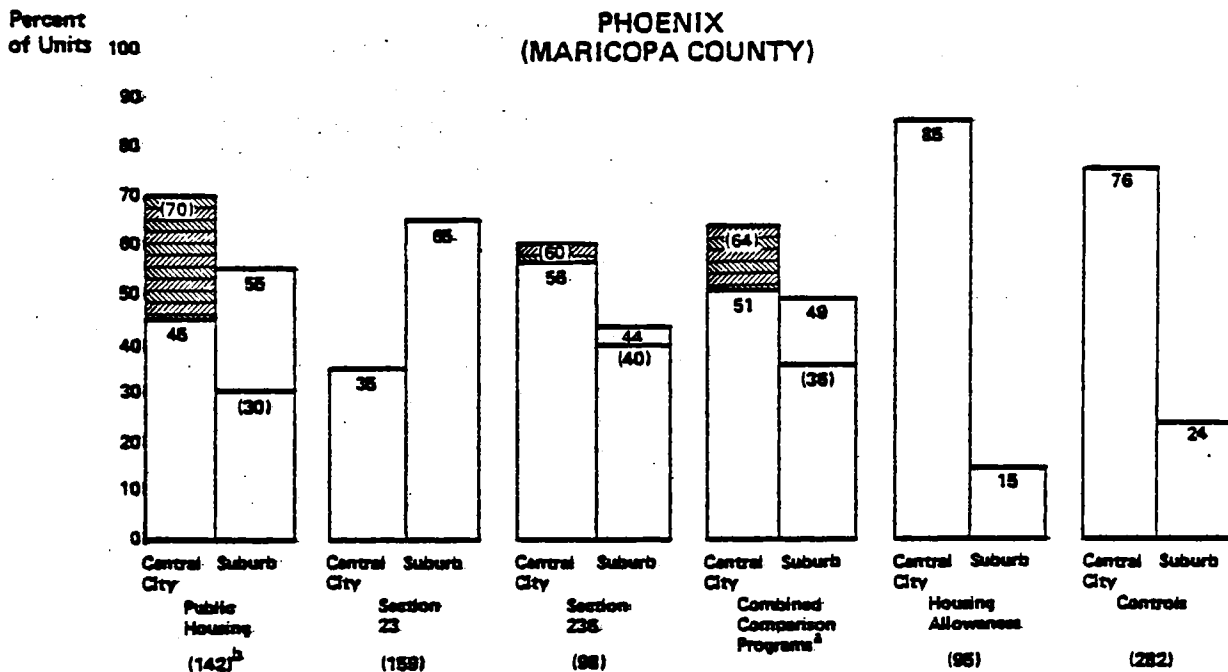
KEY: Signifies percentage calculated for all Public Housing Units (including other than conventional and turnkey projects) and all Section 236 Units (including projects without Rent Supplement Units).

SAMPLE: Comparison Program Households—a sample of households participating in the Public Housing, Section 23, and Section 236 programs in Allegheny and Maricopa counties, plus households in Public Housing and Section 236 projects excluded from the basic study population. Housing Allowance households—Housing Gap Minimum Standards households active and receiving full payments at two years after enrollment in the Demand Experiment. Control households active at two years after enrollment in the Demand Experiment.

DATA SOURCES: Program Comparison and Third Periodic Interviews, 1970 Census of Population, and Agency File Data.

a. Weighted averages for Comparison Programs are based on proportional representation of each program in the study (not the sampled) population. Weights are 0.687, 0.013, and 0.300 in Pittsburgh and 0.349, 0.071 and 0.580 in Phoenix for Public Housing, Section 23, and Section 236 respectively.

b. Weighted average of sample sizes in the elderly and nonelderly strata in Phoenix Public Housing; see Appendix II for a description of the calculation of statistics based on this sample.

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Table 68

LOW-INCOME HOUSEHOLD CONCENTRATION
IN FINAL NEIGHBORHOOD BY PROGRAM
(Mayo et al., 1979, Part 1, Table 5-1)

	PITTSBURGH			PHOENIX		
	MEAN PERCENTAGE OF HOUSEHOLDS IN CENSUS TRACT WITH INCOMES OF LESS THAN $5,000	STANDARD DEVIATION	SAMPLE SIZE	MEAN PERCENTAGE OF HOUSEHOLDS IN CENSUS TRACT WITH INCOMES OF LESS THAN $5,000	STANDARD DEVIATION	SAMPLE SIZE
Public Housing	55%**	14	(286)	51%**	11	(141)[a]
Section 23	46**	13	(106)	34*	14	(159)
Section 236	40**	19	(330)	28	9	(98)
Combined Comparison Programs[b]	50**	–	(722)	36**	–	(398)
Housing Allowances	32	10	(91)	30	14	(94)
Controls	33	13	(318)	36	16	(282)

SAMPLES: Comparison Program households--a sample of households participating in the Public Housing, Section 23 and Section 236 programs in Allegheny and Maricopa counties. Housing Allowance households--Housing Gap Minimum Standards households active and receiving full payments at two years after enrollment in the Demand Experiment. Control households--active at two years after enrollment in the Demand Experiment.

DATA SOURCES: Program Comparison and Third Periodic Interviews and the 1970 Census of Population.

NOTE: t-tests represent contrast between Comparison Programs and Housing Allowance result.

a. Weighted average of sample sizes in the elderly and nonelderly strata in Phoenix Public Housing; see Appendix II for a description of the calculation of statistics based on this sample.

b. Weighted averages for Comparison Programs are based on proportional representation of each program in the study (not the sampled) population. Weights are 0.687, 0.013, and 0.300 in Pittsburgh and 0.349, 0.071 and 0.580 in Phoenix for Public Housing, Section 23, and Section 236 respectively.

* Significant at the 0.05 level.
** Significant at the 0.01 level.

Table 69

MINORITY CONCENTRATION OF NEIGHBORHOODS IN PITTSBURGH AND PHOENIX BY PROGRAM
(Mayo et al., 1979, Part 1, Table 5-4)

	PITTSBURGH						PHOENIX					
	PUBLIC HOUSING	SECTION 23	SECTION 236	COMBINED COMPARISON PROGRAMS[a]	HOUSING ALLOWANCES	CONTROLS	PUBLIC HOUSING	SECTION 23	SECTION 236	COMBINED COMPARISON PROGRAMS[a]	HOUSING ALLOWANCES	CONTROLS
MEAN PERCENT MINORITY IN CENSUS TRACT:												
All units	49%	51%	45%	48%	14%	14%	50%	26%	17%	29%	17%	30%
(Newly constructed units)	(36)		(29)				(44)		(17)			
PERCENT OF UNITS WITH:												
0-15% Minority Population in Tract	26	18	46		73	75	0	38	64		66	44
15-50% Minority	15	36	7		16	14	63	31	31		30	32
Greater than 50% Minority	59	46	47		11	11	37	30	5		4	23
SAMPLE SIZE	(286)	(106)	(330)		(91)	(318)	(142)[b]	(159)	(98)		(95)	(280)

SAMPLES: Comparison Program households--a sample of households participating in the Public Housing, Section 23, and Section 236 programs in Allegheny and Maricopa counties. Housing Allowance households--Housing Gap Minimum Standards households active and receiving full payments at two years after enrollment in the Demand Experiment. Control households active at two years after enrollment in the Demand Experiment.

DATA SOURCES: Program Comparison and Third Periodic Interviews and the 1970 Census of Population.

NOTE: Newly constructed units refers to units built after 1970.

a. Weighted averages for Comparison Programs are based on proportional representation of each program in the study (not the sampled) population. Weights are 0.687, 0.013, and 0.300 in Pittsburgh and 0.349, 0.071, and 0.580 in Phoenix for Public Housing, Section 23, and Section 236, respectively.

b. Weighted average of sample sizes in the elderly and nonelderly strata in Phoenix Public Housing; see Appendix II for a description of the calculation of statistics based on this sample.

Table 70
MINORITY CONCENTRATION OF NEIGHBORHOODS BY RACE/ETHNIC GROUP OF PROGRAM PARTICIPANTS
(Mayo et al., 1979, Part 1, Table 5-5)

	PUBLIC HOUSING	SECTION 23	SECTION 236	HOUSING ALLOWANCES	CONTROLS
PITTSBURGH					
WHITE HOUSEHOLDS					
Mean Percent Minority (Black) in Census Tract	20%**	[24]%**	12%**	5%	5%
SAMPLE SIZE	(112)	(7)	(122)	(72)	(252)
BLACK HOUSEHOLDS					
Mean Percent Minority (Black) in Census Tract	68**	53	64*	47	50
SAMPLE SIZE	(174)	(99)	(208)	(19)	(63)
PHOENIX					
WHITE HOUSEHOLDS					
Mean Percent Spanish American in Census Tract	42%	18%	12%	12%	16%
Mean Percent Black in Census Tract	7	2	0	1	2
Mean Percent Minority (Spanish American or Black) in Census Tract	49**	20**	12	13	18
SAMPLE SIZE	(27)[a]	(99)	(79)	(66)	(180)
SPANISH AMERICAN HOUSEHOLDS					
Mean Percent Spanish American in Census Tract	42	36	[28]†	18	40
Mean Percent Black in Census Tract	6	7	[3]	8	7
Mean Percent Minority (Spanish American or Black) in Census Tract	48**	42**	[31]	26	47
SAMPLE SIZE	(72)[a]	(41)	(9)	(22)	(69)

SAMPLES: Comparison Program households--a sample of households participating in the Public Housing, Section 23, and Section 236 programs in Allegheny and Maricopa counties. Housing Allowance households-- Housing Gap Minimum Standards households active and receiving full payments at two years after enrollment in the Demand Experiment. Control households active at two years after enrollment in the Demand Experiment.

DATA SOURCES: Program Comparison, Baseline, and Third Periodic Interviews, and the 1970 Census of Population.

NOTE: t-tests represent contrast between Comparison Programs and Housing Allowance with respect to percent minority in tract. Brackets indicate amounts based on 10 or fewer observations.

a. Weighted average of sample sizes in the elderly and nonelderly strata in Phoenix Public Housing; see Appendix II for a description of the calculation of statistics based on this sample.
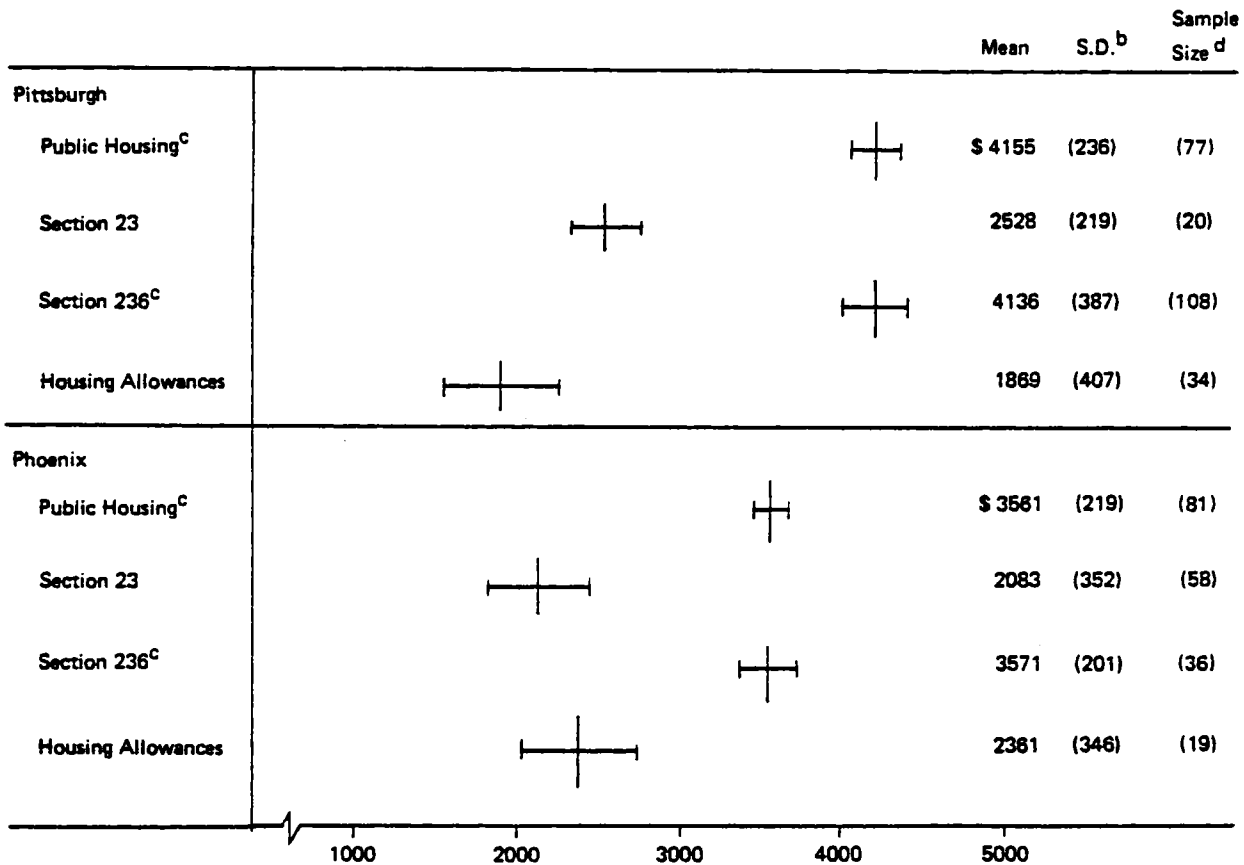
† Significant at the 0.10 level.
* Significant at the 0.05 level.
** Significant at the 0.01 level.

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Figure 34

TOTAL ANNUAL COST FOR TWO-BEDROOM UNITS IN 1975[a]
(Dollars)
(Mayo et al., 1979, Part 2, Figure 3-1)

	Mean	S.D.[b]	Sample Size[d]
Pittsburgh			
Public Housing[c]	$ 4155	(236)	(77)
Section 23	2528	(219)	(20)
Section 236[c]	4136	(387)	(108)
Housing Allowances	1869	(407)	(34)
Phoenix			
Public Housing[c]	$ 3561	(219)	(81)
Section 23	2083	(352)	(58)
Section 236[c]	3571	(201)	(36)
Housing Allowances	2361	(346)	(19)

Sample: A sample of Public Housing, Section 23, Section 236, and Housing Allowance units in Allegheny and Maricopa counties. (See Appendices I and II for a discussion of sample design.)

Data Sources: Comparison Program cost data, Household Report Forms, and Housing Evaluation Forms.

[a]Means for each program are indicated by the central vertical line; the one standard deviation (or standard error) range, by the smaller vertical lines.

[b]Standard deviation for Section 23 and Housing Allowances; standard error of estimate from Equations (1) and (2) for Public Housing and Section 236.

[c]Estimated total costs for Public Housing and Section 236 are calculated by weighting predicted costs for two-bedroom units built or rehabilitated in 1975, by subprogram, by sample weights for each subprogram.

[d]Sample sizes are for the number of two-bedroom units actually sampled in each program. Cost estimates for two-bedroom units in Public Housing and Section 236 are actually based on regression equations with larger numbers of observations (see Table VI-1).

Figure 35

TOTAL ANNUAL COSTS FOR UNITS
OF VARIOUS SIZES — 1975[a]
(Mayo et al., 1979, Part 2, Figure 3-2)
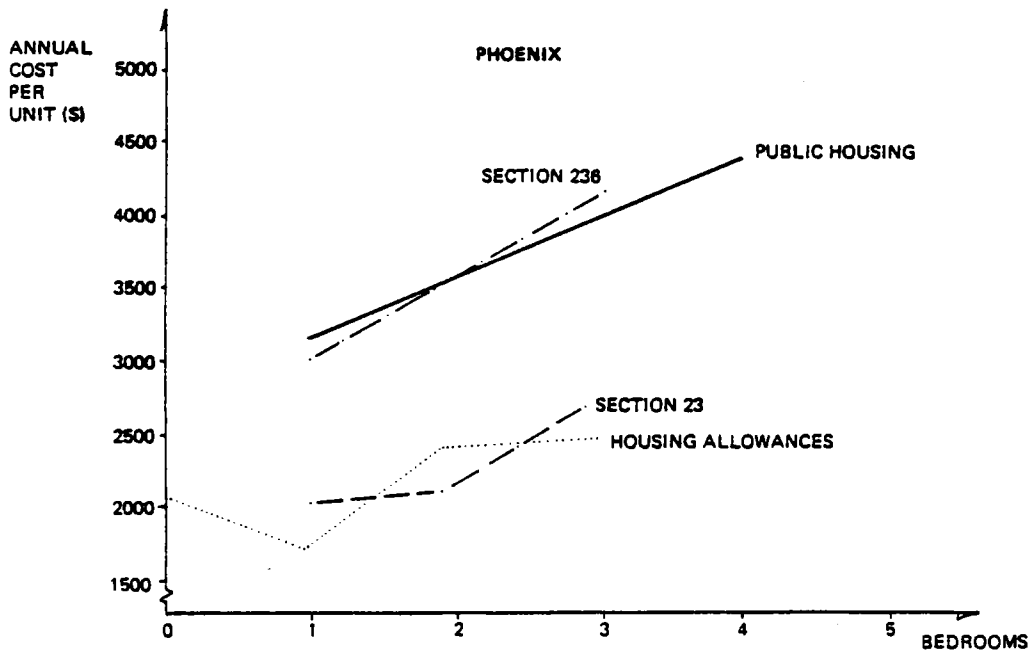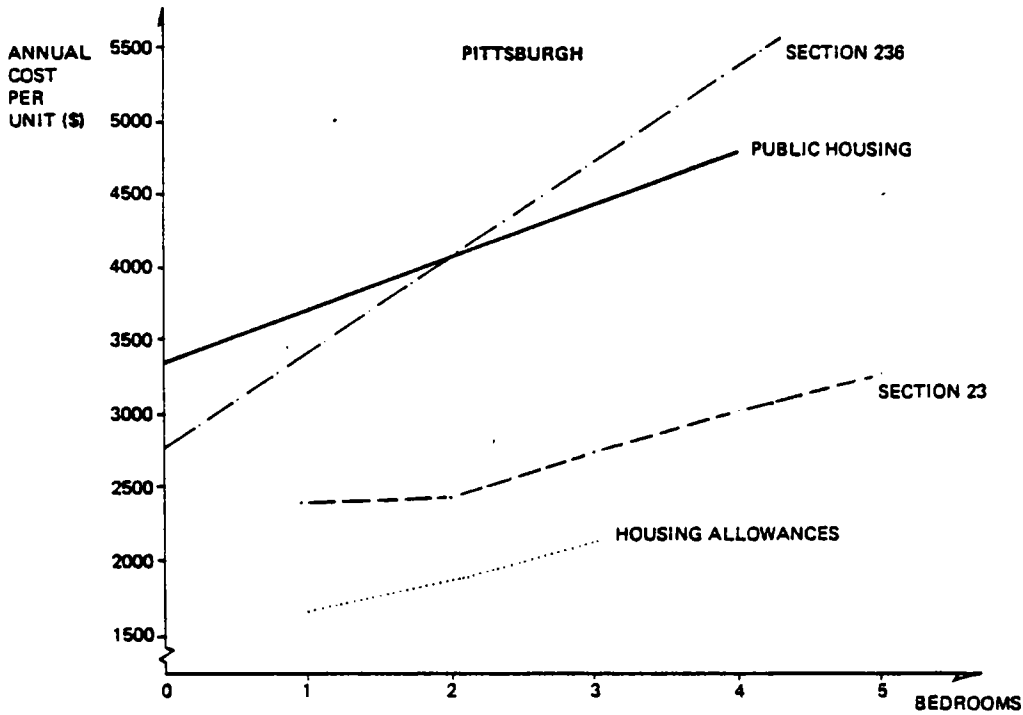
Sample: A sample of Public Housing, Section 23, Section 236, and Housing Allowance units in Allegheny and Maricopa counties.

Data Sources: Comparison Program cost data and Household Report Forms.

a. Estimated costs for Public Housing and Section 236 are shown only for unit sizes for which more than 10 observations existed in the sample, and are based on predicted values for 1975 from Equations (1) and (2). Costs for other programs are based directly on sample data, and are shown only when there were more than 10 observations for the unit size.

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Table 71

ALLOCATION OF COSTS AMONG TENANTS,
FEDERAL, AND LOCAL GOVERNMENTS
(Proportion)
(Mayo et al., 1979, Part 2, Table 4-2)

	SECTION 236 WITH RENT SUPPLEMENT	PUBLIC HOUSING	HOUSING ALLOWANCE	SECTION 23	SECTION 236 WITHOUT RENT SUPPLEMENT
TENANT					
Pittsburgh	0.253	0.316	0.392	0.395	0.506
Phoenix	0.243	0.273	0.338	0.336	0.575
FEDERAL GOVERNMENT					
Pittsburgh	0.720	0.589	0.608	0.605	0.470
Phoenix	0.726	0.601	0.662	0.664	0.397
LOCAL GOVERNMENT					
Pittsburgh	0.027	0.094	0	0	0.024
Phoenix	0.031	0.126	0	0	0.028

SAMPLE: A sample of Public Housing, Section 23, Section 236, and Housing Allowance units in Allegheny and Maricopa counties.

DATA SOURCES: Comparison Program cost data, Household Report Forms, and Housing Evaluation Forms.

Table 72

DETAILED COMPONENTS OF FEDERAL COSTS FOR TWO-BEDROOM UNITS[a]
(Dollars Per Year)
(Mayo et al., 1979, Part 2, Table 4-5)

COMPONENTS	PITTSBURGH	PHOENIX
PUBLIC HOUSING		
DIRECT COSTS		
Original debt service	$ 693	$ 594
Modernization debt service	23	300
HUD administration	20	20
Operating subsidy	382	295
INDIRECT COSTS		
Foregone federal taxes	241	217
TOTAL FEDERAL COSTS	$1,359 (77)	$1,426 (51)
SECTION 23		
DIRECT COSTS		
Net leasing cost[b]	$ 382	$ 783
Operating cost	1,193	488
HUD administration	20	20
INDIRECT COSTS		
Foregone federal taxes	40	51
TOTAL FEDERAL COSTS	$1,635 (20)	$1,342 (56)
SECTION 236		
DIRECT COSTS		
Interest reduction payment (includes mortgage insurance premium)	$1,100	$ 747
Rent supplements	226	143
HUD administration	30	30
INDIRECT COSTS		
FHA insurance loss	247	241
GNMA Tandem Plan	93	159
Foregone federal taxes	40	189
Change in operating reserves (- = increase; + = decrease)	+85	- 9
TOTAL FEDERAL COSTS	$1,811 (108)	$1,490 (36)
HOUSING ALLOWANCES		
DIRECT COSTS		
Housing allowance payment	$ 746	$1,019
Operating costs	274	274
HUD administration	20	20
INDIRECT COSTS		
Foregone federal taxes	41	55
TOTAL FEDERAL COSTS	$1,081 (34)	$1,368 (19)

SAMPLE: A sample of Public Housing, Section 23, Section 236, and Housing Allowance units in Allegheny and Maricopa counties.

DATA SOURCES: Comparison Program cost data, Household Report Forms, and Housing Evaluation Forms.

a. Costs may not add to figures shown in Table 4-4 due to rounding and slightly different samples for some cost components. Sample sizes are shown in parentheses.

b. Equal to lease amount less tenant contribution.

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Table 73

ESTIMATED RATIO OF TOTAL COSTS TO MARKET RENTAL
VALUE FOR UNITS LEASED OR CONSTRUCTED IN 1975
(Mayo et al., 1979, Part 2, Table 5-1)

PROGRAM	RATIO	STANDARD DEVIATION[a]	SAMPLE SIZE
PITTSBURGH			
Public Housing	2.20 [1.87][b]	0.19	(241)
Section 23	1.67	0.16	(93)
Section 236	2.01 [1.91][c]	0.32	(281)
Housing Allowances	1.15	0.16	(83)
PHOENIX			
Public Housing	1.79 [1.46][b]	0.18	(225)
Section 23	1.11	0.20	(138)
Section 236	1.47 [1.34][c]	0.13	(87)
Housing Allowances	1.09	0.18	(65)

SAMPLE: A sample of Public Housing, Section 23, Section 236, and Housing Allowance units in Allegheny and Maricopa counties.

DATA SOURCES: Comparison Program cost data, Initial and monthly Household Report Forms, Housing Evaluation Forms, and 1970 Census of Population.

a. For Public Housing and Section 236, cost to market value ratios are estimated based on Equations (1) through (4), standard errors for which are reported in place of standard deviations in this column.

b. Ratio based on calculated costs to estimated market value for all units (regardless of size) built between 1970 and 1974, rather than on regression.

c. Ratio based on calculated costs for all sampled units (built between 1969 and 1975), rather than on regression.

Table 74

ESTIMATED RATIO OF TOTAL COSTS TO
MARKET RENTAL VALUE FOR MAJOR SUBPROGRAMS
FOR UNITS CONSTRUCTED OR REHABILITATED IN 1975[a]
(Mayo et al., 1979, Part 2, Table 5-2)

SUBPROGRAM	PITTSBURGH	PHOENIX
PUBLIC HOUSING		
Conventional	2.19	1.73
Turnkey	2.24	2.10[c]
SECTION 236		
New Construction		
Limited dividend	1.90	1.44
Nonprofit	1.90	1.44
Rehabilitation		
Limited dividend	2.33[b]	--
Nonprofit	2.09[b]	--

SAMPLE: A sample of Public Housing and Section 236 units in Allegheny and Maricopa counties.

DATA SOURCES: Comparison Program cost data, Initial and monthly Household Report Forms, Housing Evaluation Forms, and 1970 Census of Population.

a. Based on predicted values from regression equations controlling for year of construction or rehabilitation and subprogram.

b. Significantly different from Section 236 new construction at the 0.01 level.

c. Significantly different from Conventional Public Housing at the 0.01 level.

d. Significantly different from Section 236 new construction with limited dividend sponsors at the 0.01 level.

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