SECOND ANNUAL REPORT

of the

HOUSING ASSISTANCE SUPPLY EXPERIMENT

Sponsored by

The Office of Policy Development and Research
U.S. Department of Housing and Urban Development

October 1974 — September 1975

R-1959-HUD
May 1976

Rand
SANTA MONICA, CA. 90406

The research reported here was performed pursuant to Contract No. H-1789 with the Office of Policy Development and Research, U.S. Department of Housing and Urban Development. Statements and conclusions in this report are those of Rand's research staff and do not necessarily reflect the views of the sponsoring agency.

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PREFACE

This report was prepared for the Office of Policy Development and Research, U.S. Department of Housing and Urban Development (HUD). It describes the progress of the Housing Assistance Supply Experiment (HASE) during its second year of field operations, October 1974 through September 1975; summarizes experimental findings to date; and discusses future plans and problems.

The experiment is being conducted by The Rand Corporation under a contract with HUD. A fullscale housing allowance program has been mounted under Rand's supervision in each of two midwestern metropolitan areas in order to learn about the effects of such a program on local housing markets. At the end of September 1975, the allowance program had been operating for fifteen months in Brown County, Wisconsin, and for nine months in St. Joseph County, Indiana.

This report continues the historical account of the Supply Experiment which was begun in the first annual report.* It summarizes the progress of the allowance programs and the research activities conducted in conjunction with them. Part of the research is an annual cycle of field surveys addressed to the owners and occupants of a marketwide sample of residential properties in each site.

The report also presents selected research findings for each site, drawing on program records and on data collected in the field surveys. These findings relate to the characteristics of each local housing market before the allowance program began and to the characteristics and experiences of those who have so far enrolled in the programs.

Finally, we review our plans for the coming year and discuss various pending issues that relate either to the experimental allowance programs or to the research program.

Because the experiment is large and complex and operates on different schedules in its two sites, its progress and findings cannot be neatly summarized in a linear exposition. As shown in the table of contents, we have divided the material both by site and by topic. Depending on their special interests, readers may wish to follow different threads through the report. To facilitate selective reading, we have provided a summary that closely follows the organization of the main text and directs the reader to the pages where the summarized points are fully developed. We have also published an executive summary of this report, which appears separately as R-1959/1-HUD.

Conducting the Supply Experiment during the past year has required close cooperation among a number of institutions and dedicated efforts by their staffs. It is appropriate here to acknowledge the support, advice, and technical contributions we have received from them. The institutions are HUD's Office of Policy Development and Research, the sponsoring agency; the Urban Institute, which has general responsibility for integrating findings from HUD's different housing allowance experiments; Westat, Inc., and the National Opinion Research Center, both field survey subcontractors for the experiment; local governments in Brown County,

* *First Annual Report of the Housing Assistance Supply Experiment*, The Rand Corporation, R-1659-HUD, October 1974.

Wisconsin, and St. Joseph County, Indiana, where the experiment is being conducted; and the Housing Allowance offices established in these places to administer the experimental program. We regret that the individuals at these institutions who have earned our respect and gratitude are too numerous to name here.

This report draws directly or indirectly on material prepared by Rand's staff for the Supply Experiment over a period of nearly four years. A research project of this type requires a great deal of technical documentation, the external audience for which is limited to those who wish to probe deeply into the research methods. For the Supply Experiment, this documentation exists in the form of working notes, copies of which are permanently on file at Rand, HUD, and the National Technical Information Service (NTIS). Some of these notes are scheduled for revision and publication as reports in the near future; others, because of their limited audience, will not be published for general distribution, but can be made available by Rand, HUD, or NTIS to requestors on a case-by-case basis. To assist the reader who needs such additional documentation, we have cited the relevant working notes in the text of this report and in Appendix A.

A number of people helped to organize the material covered in this report and to draft its text. We have drawn extensively on administrative reports prepared by the staffs of the Housing Allowance Office in each site. Draft material on the progress of the experiment was prepared by the HASE group managers: Robert Dubinsky for the Field and Program Operations Group, Douglas Scott for the Survey Group, Donald P. Trees for the Survey Data Preparation Group, and Eric F. Harslem for the Data Systems Groups. The report was planned and much of its text was written by Ira S. Lowry, manager of the Design and Analysis Group.

The report also draws on research materials prepared by HASE staff. Within the Design and Analysis Group, Therman Britt, Marsha A. Dade, William L. Dunn, Phyllis Ellickson, Iao Katagiri, Kevin McCarthy, and Daniel A. Relles organized research materials especially for presentation here. Other research material, based on published work, is credited by footnote. The entire professional staff of HASE, all of whom contributed indirectly, is listed in Appendix D.

Drafts of the report were reviewed in whole or in part by the following: Charles E. Nelson, program director for HASE; G. Thomas Kingsley, deputy director; the group managers named above; Daniel J. Alesch and Michael F. Shea, site managers for HASE; Deborah R. Hensler, director of Rand's survey research unit; Gene Fisher, head of Rand's Management Sciences Department; and Barbara R. Williams, Rand deputy vice-president (Washington). In HUD's Office of Policy Development and Research, the draft was reviewed by Gilmer Blankespoor, government program manager; and Martin D. Levine, government technical representative.

Linda Ellsworth and Rachel Kuntz prepared most of the first draft typescript and tables. Charlotte Cox edited the typescript and supervised production of final copy, with the assistance of Linda Colbert. Doris Dong prepared the graphics.

This report was prepared pursuant to HUD contract H-1789, Mod. 21, and fulfills the requirements of Task 2.13 of that contract.

SUMMARY

The Housing Assistance Supply Experiment is one among several elements of the Experimental Housing Allowance Program undertaken by the Office of Policy Development and Research, U.S. Department of Housing and Urban Development. The program is designed to help HUD decide whether a national program of direct cash assistance to low-income households is a feasible and desirable way to help them secure decent housing in a suitable living environment; and if so, to help determine the best terms and conditions for such assistance and the most efficient and appropriate methods for administering a nationwide program.

As part of this program, the Supply Experiment addresses issues of market and community response to housing allowances. It entails operating a fullscale allowance program in each of two metropolitan areas, chosen for strong contrasts in their housing markets, for ten years; and monitoring both program operations and market responses for about five years. The communities selected for the experiment are Brown County, Wisconsin (whose central city is Green Bay), and St. Joseph County, Indiana (whose central city is South Bend). In the former site, the allowance program is countywide; in the latter, it began in South Bend only, but has since expanded its jurisdiction.

THE HOUSING ALLOWANCE PROGRAM

The allowance program is open to all households in these jurisdictions (except single persons under 62 years of age, unless handicapped or displaced by public action) that are unable to afford the standard cost of adequate housing on the local market without spending more than a fourth of their adjusted gross incomes. Each enrolled household receives monthly cash payments equal to the "housing gap" thus calculated, provided that the housing unit it occupies meets minimum standards of decency, safety, and sanitation.

Both renters and homeowners may participate in the program, and participants may change tenure or place of residence (within the program jurisdiction) without loss of benefits. Participating renters are responsible for locating suitable housing, negotiating with landlords over rent and conditions of occupancy, paying their rent, and seeing that their dwellings are maintained to program standards. Participating owners are entirely responsible for negotiating purchases and mortgage financing, meeting their obligations to lenders, and maintaining their properties to program standards.

In short, the experimental allowance program provides cash assistance that enables each participant to afford decent, safe, and sanitary housing, on condition that he find and occupy such housing and maintain its quality; thus, the program relies heavily on the participant's initiative and on normal market processes. The amount of the allowance is usually much less than, and does not vary with, actual housing expenditures. Since the marginal dollar spent ordinarily comes out of the participant's nonallowance resources, he has a motive to seek the best bargain he can find on the local market.

The program is funded by a ten-year annual contributions contract (ACC) between HUD and a local housing authority at each site. That authority in turn delegates program operations to a nonprofit corporation established by Rand at each site, the Housing Allowance Office (HAO). The HAO enrolls eligible applicants (up to ACC ceilings), evaluates their housing, and disburses payments.

THE RESEARCH PROGRAM

The experimental allowance program is designed to simulate a permanent national program in its effects on the local housing market and the community. These effects are monitored principally through an annual cycle of field surveys addressed to a marketwide sample of residential properties, once before the program begins and for five years thereafter.

Each year Rand, through its fieldwork subcontractors, will observe changes in each such property (and in its neighborhood) and will interview the owner and the occupants. From landlords of rental properties, these interviews seek (among other items) a detailed account of property financing and property income, expenses, repairs, and improvements for the preceding year. Tenants and homeowners are queried at length about the characteristics of their housing, the elements of its cost, and their feelings about their housing and neighborhoods. They are also asked about previous changes of residence and the associated circumstances. Landlords, tenants, and homeowners will all be asked to give their views on the experimental allowance program and its local effects. (Those interviewed will include both program participants and nonparticipants, the latter predominating.)

The data gathered from these surveys, from HAO records, and from other sources will be used to analyze the effects of the program. The research is directed primarily at four clusters of issues bearing on the merits and optimal design of a national allowance program:

- *Supply responsiveness.* How will the suppliers of housing services—landlords, developers, and homeowners—react when allowance recipients attempt to increase their housing consumption? Specifically, what mix of price increases and housing improvements will result? How long will these responses take to work themselves out to a steady state? How will the responses differ by market sector?
- *Behavior of market intermediaries and indirect suppliers.* How will mortgage lenders, insurance companies, and real estate brokers respond to an allowance program? Will their policies help or hinder the attempts of allowance recipients to obtain better housing and those of landlords to improve their properties? What happens to the availability, price, and quality of building services and of repair and remodeling services? What seem to be the reasons for changes in institutional or industrial policies?
- *Residential mobility and neighborhood change.* In their attempts to find better housing (or better neighborhoods), will many allowance recipients relocate within the metropolitan area? What factors influence their decisions to move or to stay? What types of neighborhoods will the movers seek and succeed in entering? Do moves by allowance recipients set in motion a chain of moves by nonrecipients—either into neighborhoods vacated by recipients or out of neighborhoods into which recipients have moved?
- *Effects on nonparticipants.* How will households not receiving housing allowances—particularly those whose incomes are within or just above the range of eligibility—be affected by the program? Specifically, will the increased housing demands of allowance recipients cause an increase in housing prices for nonrecipients? Whether or not such price increases occur, will nonrecipients perceive personal hardships or benefits from the program? How will they perceive and react to allowance-stimulated neighborhood changes?

BACKGROUND FOR THIS REPORT

The Housing Assistance Supply Experiment may be conveniently dated from October 1971, when HUD invited Rand to prepare a design study to complement work done by the Urban Institute on what later became the Demand Experiment. Our report was submitted in December 1971; in April 1972, HUD contracted with Rand for Phase I (the planning phase) of the Supply Experiment.

The following eighteen months were spent principally on site selection, elaborating the research design, and planning the experimental housing allowance program.

Brown County, Wisconsin, was designated as the first of two experimental sites in December 1972; selection of the second site, St. Joseph County, Indiana, was delayed until April 1974.

A draft of the research design was submitted to HUD in May 1973; it was reviewed by HUD and by an outside committee of experts during the summer of 1973 and, with revisions, was accepted by HUD and Rand as the basis for the Supply Experiment in October 1973.

A draft of the program design was submitted to HUD in August 1973 and was also accepted by HUD and Rand in October 1973, subject to resolution of legal difficulties relating to the use of Sec. 23 funds to assist homeowners. These difficulties were not finally resolved until February 1974.

Phase II of the Supply Experiment (the operating phase) may be conveniently dated from March 1973, when Rand opened its site office in Brown County. It thus overlapped the planning phase by some months.

The historical portions of the first annual report focused on the period from the beginning of Phase II through September 1974. The historical portions of this second annual report deal essentially with the second period of Phase II, beginning in October 1974 and running through September 1975.

PROGRESS IN SITE I

The Brown County Housing Allowance Office began open enrollment in June 1974. During the next fifteen months (through September 1975), it received more than 7,000 preliminary applications and enrolled nearly 3,600 of the county's 8,000 eligible households. Over 5,500 housing evaluations and reevaluations have been completed for enrollees and nearly 2,700 enrollees have received one or more hous- [pp. 15-25]

ing allowance payments. As an institution, the HAO has completed its formative stage and is settling into routine operations that should continue for the duration of the experiment.

On-site research began in 1973 with sample selection and, early in 1974, the baseline surveys of a sample of about 4,400 residential properties throughout the county. In November 1974, a permanent panel of 1,945 properties was selected from among those surveyed at baseline; and during the first half of 1975, a second wave [pp. 25-32] of surveys was conducted on the empaneled properties. The Wave 2 surveys included field observations of more than 2,700 residential buildings and interviews or attempted interviews with 1,300 landlords, 3,000 tenants, and nearly 700 homeowners. At the end of September 1975, survey questionnaires and other field reports were being prepared for machine tabulation and analysis at Rand's office in Santa Monica.

In the meantime, the baseline survey files and HAO administrative records for the first year of program operations were undergoing audit and analysis in Santa [pp. 32-35] Monica. By the end of the period, codebooks describing the data base and audit reports on its completeness and reliability were either published or nearing completion for all surveys, and analysis of the data was well under way. The first analytical report was published in April 1975 and five others were either published or in draft by the end of September.

PROGRESS IN SITE II

St. Joseph County was selected as the second site of the Supply Experiment in April 1974, about a year after Brown County was chosen as the first site. By October [pp. 36-43] 1974, the HAO had been organized there, and the first household was enrolled in the program in December. Applications were invited from the general public beginning in April 1975. By the end of September 1975, the HAO had received 5,600 preliminary applications, nearly 2,100 households had been enrolled, and payments were being made to over 1,000 households whose housing had been approved for occupancy.

Initially, the allowance program was open only to residents of South Bend, where about half the county's households live. In June 1975, county officials agreed to allow the program to operate in unincorporated areas of the county that lie within five miles of the boundary of South Bend; and in August one of seven small outlying [pp. 43-49] towns voted to participate. Enrollment is now open to 75 percent of the county's households. The most important of the nonparticipating jurisdictions is Mishawaka, a city adjoining South Bend that contains about 15 percent of the county's households. Early in 1976, Mishawaka is expected to reconsider its earlier refusal to participate.*

Concurrently with the organization and development of the allowance program, the research program got under way in St. Joseph County. Fieldwork for survey [pp. 49-58] sample selection began in May 1974, a screening survey of 10,000 households was concluded in August, and baseline interviews with the owners and occupants of some 4,000 residential properties were attempted between November 1974 and June 1975.

*Mishawaka joined the allowance program in March 1976.

In addition, field reports on over 5,000 residential buildings and 12,000 street segments were completed.

At Rand's offices in Santa Monica, screening survey records were processed during the fall of 1974 and screening survey data were analyzed both for sample selection and to provide the HAO with information that was needed to plan its operations. Estimates of program size and cost were completed in February 1975, and benefit standards reflecting local housing costs were recommended to and approved by HUD.

Processing the large volume of baseline survey records began early in 1975, as they were received from the field. At the beginning of September 1975, machine-readable records of the survey of landlords were ready for audit and analysis; the [pp. 58-61] other files were scheduled to follow by the end of the year. Finally, preparations were made for selecting the permanent panel of residential properties from among those surveyed at baseline.

PRELIMINARY FINDINGS: BROWN COUNTY, WISCONSIN

Our analysis of baseline survey data for Brown County enables us to describe the housing market there immediately before the experimental allowance program began. Analysis of HAO records for the first year of program operations enables us to describe the characteristics of applicants and their experiences in enrolling and seeking housing that meets program standards.

The Rental Housing Market at Baseline

We estimate that there were 6,846 rental properties in Brown County at the end of 1973. These properties had about 16,200 housing units on them, roughly a third [pp. 66-68] of all housing units in the county. The remainder of the housing stock consisted of owner-occupied single-family homes.

About 23 percent of the rental units were in multiple dwellings of five or more units, 57 percent were in small multiple dwellings, and 15 percent were single-family homes. The remainder included about 900 mobile homes, usually owned by their occupants but located on rented land; and about 350 rooming-house units. About a fourth of all rental properties had resident landlords and 13 percent had one or more units occupied by relatives of the landlord.

Most of the large apartment houses were built within the preceding decade, but smaller multiple dwellings and single-family homes were older (median age over 40 years). At least 40 percent of the smaller multiunit properties began life as owner-occupied single-family homes, with rental units added later.

The ownership of rental property in Brown County is diffused among some 5,000 proprietors, including a few partnerships and corporations. Nearly 83 percent held [pp. 68-69] only a single property, whose average size was 2.3 housing units. Only 13 landlords owned more than ten properties.

For most landlords, real estate holdings were a distinctly minor source of income, supplementing either a fulltime job in an unrelated industry or a pension or social security. Generally, landlords manage their properties themselves, with occasional help from an accountant or lawyer. Relations with tenants are relaxed and comfortable.

To sum up, nearly all rental real estate in Brown County is owned and managed as a sideline by nonprofessional investors. Only the largest properties—large apartment buildings and mobile home parks and a few rooming houses—seem to be professionally developed and managed. The typical landlord is the owner of a small multiunit property on which he lives, caring for the property after work or on weekends.

Rental Properties as Investments

[pp. 69-72]

Most landlords in Brown County seemed to feel that their properties had done well financially in recent years and also were optimistic about the future. They usually cited rising rents as the main reason for optimism. Yet only a fourth had raised rents on their properties during the preceding year and only a fourth expected to raise them during the coming year. Nearly half of all landlords told us that they *neither* had raised rents during the preceding year *nor* intended to increase them during the following year. Given the tightness of the market and inflation in operating costs over the several years preceding the survey, these are to us surprising responses.

A striking feature of rental property finance in Brown County is its limited dependence on borrowed capital. Nearly half of all rental properties were uncencumbered by any kind of debt; only the large multiunit properties relied heavily on mortgage financing.

The principal reason for this pattern seems to be that most of these properties have been under the same ownership for many years, and mortgage debt has been retired. For properties that do have mortgages, the owner's equity is generally substantial, the debt usually accounting for no more than half the property's market value.

Vacancy Rates and Tenant Turnover

[pp. 72-75]

By conventional measures, the rental vacancy rate in Brown County has been low at least since 1970. During the winter of 1973-74, when our surveys were conducted, the rate for regular rental properties was about 2.8 percent—a figure that may be compared with 6.4 percent for the Midwest and 6.2 percent nationally.

The 2.8 percent figure is seasonal; our data enabled us to estimate the annual average vacancy rate for 1973 at 5.1 percent for these properties, with an average vacancy duration of six weeks. Tenant turnover was rapid—44 per 100 units during 1973.

Different configurations of vacancy rates, vacancy duration, and tenant turnover help to define rental submarkets in Brown County. (A submarket consists of rental units that compete directly for tenants, but less directly with units in other submarkets.) We find that large multiunit properties, small multiunit properties, and single-family houses form submarkets; and within the first two classes, there are additional distinctions related to rent level and age of building.

Thus, although properties with five or more units generally had an average annual vacancy rate of about 6.4 percent, those with high rents had much more frequent turnover of tenants than those with low rents. Rapid turnover, in this case, was offset by short vacancy durations. Among properties with two to four units,

turnover experience was the same for new and old buildings, but vacancy durations and annual average vacancy rates differed sharply.

Overall, submarkets with the shortest vacancies tend to have newer buildings, higher rents, and housing of better quality. More of them require security deposits and leases, and more have tenants with children. But the average duration of vacancies is not closely related either to frequency of turnover or to the annual average vacancy rate. The latter is the figure that bears most directly on the landlord's losses due to vacancies, a subject discussed further below.

Rental Revenues and Expenses

[pp. 75-80]

From each landlord interviewed at baseline, we sought (and usually obtained) a detailed account of rental income and expenses related to the sample property. Appropriately weighting each complete response, then adding across properties, we are able to construct a consolidated financial statement for all rental properties in Brown County for the calendar year 1973.

Our calculations indicate that if all housing units and commercial space on rental properties had been rented throughout the year to tenants who paid full market rent, the gross income from the properties would have amounted to $22.6 million, about 11 percent of the properties' total market value of $205 million.

Because the owners themselves occupied some units and waived all or part of the rent on other units occupied by friends, relatives, or employees, about 16 percent of the potential gross income was not realized in cash. Another 7 percent was lost because of vacancies and nonpayment of rent. Total cash receipts thus amounted to $17.4 million.

On the expense side of the ledger, Brown County's landlords paid out nearly $4.2 million in real estate taxes and $4.8 million in cash (or rent waivers to employees) to operate these properties. The value of unpaid labor by owners, their families, and their friends was estimated by the respondents at $5.8 million. (The latter figure is necessarily inexact, inasmuch as respondents had both to estimate the amount of such labor and its value.) Total operating expenses thus amounted to $14.7 million.

Balancing income against expenses, we estimate that the net cash income from Brown County's rental properties in 1973 was about $8.5 million; allowing for the value of owner-occupied units as income and of owner-supplied labor as expense, we estimate that the true net operating income was about $6.3 million, or 3.1 percent of the estimated market value of the property. If further allowance is made for real depreciation, the net rate of return was only 2.4 percent.

We expect that many of our readers will be astonished by these low rates of return, especially in a housing market that gives every sign of health: a low vacancy rate, a well-maintained housing stock, good relationships between landlords and tenants, a substantial amount of new construction each year. Clearly, the expectation of a 3-percent gross rate of return would not prompt many new investments in rental real estate if compared with a borrowing rate of 7.5 percent—the average rate on first mortgages issued in Brown County during 1973.

We too were surprised, and have examined these data from a number of perspectives in search of an explanation. We have not finished our probing, but several points may be noted.

First, individual properties—indeed, whole classes of properties—deviate substantially from the overall rate of return. For instance, the gross rate of return was

6.8 percent for high-rent properties with five or more units and 4.5 percent for new buildings with two to four units; but older and smaller properties nearly all reported rates of return of under 3.0 percent.

A second point that is especially applicable to small properties is that unpaid labor is a major element of their operating expense, often 35 to 50 percent of the total. Our respondents may have systematically overestimated the hours they and their families worked on these properties or they may have had an inflated idea of the market value of this labor. If so, the low rate of return would be at least partly attributable to an overestimate of expenses.

A third possibility is that owners systematically overestimate the market value of their properties, thereby depressing the calculated rate of return. If this were so, we would expect them to be dissatisfied with the properties' yields, which is not the case.

The most attractive general solution we find to the enigma of low rates of return is that our calculation ignores expected long-term capital gains from holding real estate. If an owner with a net rate of return of 3 percent expected the value of his property to increase at (say) 5 percent annually, the expected annual yield would be 8 percent. We know that owners in Brown County generally believe that their properties have increased and will continue to increase in value, but we cannot quantify their expectations except by inference.

It also seems likely to us that many owners of smaller rental properties, especially those who live on them, simply do not consider the market value of their own labor as an offset to the cash income from the property.

Tenants and Homeowners at Baseline

[pp. 80-85]

At the beginning of 1974, there were about 49,000 households in Brown County —some 34,000 homeowners, 14,000 renters or lodgers, and 1,000 owners of mobile homes. The summary below deals with 42,600 of these households, excluding homeowners and renters who lived in federally subsidized units, lodgers, and occupants of mobile homes.

To distinguish types of households that generally behave differently in the housing market, we have classified them by stages in the household life cycle based jointly on the number of household heads (e.g., one or two), their marital status, their ages, the presence or absence of children in the household, and the age of the youngest child. Our system defines eight common household types that can be thought of as stages through which most households pass:

Stage	*Household Composition*
1	Young single head, no children
2	Young couple, no children
3	Young couple, young children
4	Young couple, older children
5	Older couple, older children
6	Older couple, no children
7	Older single head, no children
8	Single head with children

Typically, the life cycle of a household begins when a young unmarried person leaves the parental home to form a separate household, alone or with friends (Stage 1). About 95 percent of all persons marry, thus entering Stage 2 as childless couples. Nearly as high a proportion of couples bear at least one child, passing through the next several stages as the parents age and the number of children increase (Stages 3 through 5). After childbearing ceases, the children grow up and leave home one by one, so that the household shrinks to an older couple (Stage 6), then to a widowed survivor (Stage 7). An increasingly frequent departure from this natural progression is marital disruption through separation, divorce, or death of one spouse while there are still children in the household (Stage 8).

Over 40 percent of the households in Brown County are in the first three stages, a local manifestation of the nationwide increase in the population of persons 20 to 30 years old that resulted from the postwar "baby boom." During these stages, households become increasingly integrated into their communities as husbands and wives settle into careers, children become established in school, and close relationships are formed with neighbors.

Our data for Brown County show that household size increases from an average of 1.6 persons in Stage 1 to 5.5 in Stage 5, then decreases to 1.2 in Stage 7. The number of employed persons per household follows a similar pattern of increase and decrease, except that the incidence of working wives drops sharply with the arrival of the first child (Stage 3), then increases as the children grow older. In Stage 2, about 67 percent of all wives are employed; the proportion drops to 31 percent in Stage 3, then rises to 49 percent in Stage 4. Peak labor-force participation (2.2 workers per household) is reached in Stage 5, when older children begin to find jobs. By Stage 7, the average number of workers has dropped to 0.5 per household, as household heads die or retire from the labor force.

Household income reflects this pattern of employment, the median income increasing from $7,600 in Stage 1 to $17,500 in Stage 5, then dropping to $4,700 in Stage 7. In general, income increases and decreases with household size, so that changing consumption requirements are fairly well matched by changing income. An exception is the transition from childless couple (Stage 2) to young couple with children (Stage 3). The wife usually drops out of the labor force at this point, so that median income declines; but the number of persons to be supported by that income rises from 2.0 in Stage 2 to 4.5 in Stage 3.

Life-cycle Stages and Housing Consumption

[pp. 85-93]

These data suggest that there should be a particularly strong relationship between housing consumption and progression through the life cycle. Movement through life-cycle stages brings characteristic changes in the size and composition of households and, consequently, in their housing requirements. The concomitant changes in household incomes affect their abilities to adjust consumption accordingly.

In Brown County, 90 percent of the households in Stage 1 live in rented apartments. However, nearly all of them subsequently move either to rented single-family houses or else become homeowners. Thus, 98 percent of the households in Stage 5 live in single-family houses and 95 percent own their homes. In later stages, over half the homeowners give up their homes for rented apartments.

Along with the changes in type of unit and tenure come changes in the size of the unit, from about 3.7 rooms for the rental apartments most favored by young single persons to 6.6 rooms for the single-family houses owned by nearly all older couples with children. Even so, the average number of persons per room increases between Stages 1 and 5 from 0.46 to 1.00, then decreases to 0.35 in Stage 7.

The persons-per-room ratio that varies so markedly with life-cycle stage is quite insensitive to income differences between households in a given stage. For example, in Stage 3, the ratio is identically 0.85 for renters whose incomes are under $5,000, between $5,000 and $10,000, and over $10,000. Yet those with higher incomes do spend decidedly more for housing, apparently buying extra quality rather than extra space.

For renters, the rent-income ratio declines sharply with income; but for renters in a given income bracket, this ratio is nearly constant over the entire household life cycle. For homeowners, a different pattern prevails. During the first four stages, when 90 percent of all households become homeowners, the value of their homes is closely related to their incomes, averaging about 1.7 times annual income. Once they are homeowners, however, income changes continue; consequently, the value-income ratio fluctuates erratically through Stages 5 to 7.

Life-cycle Stages and Residential Mobility

[pp. 93-98]

It is common knowledge that people tend to move less frequently as they grow older, settle into jobs, and acquire families and homes. Brown County is no exception. Sixty-eight percent of the young single household heads moved at least once in the year preceding the survey; the proportion of movers drops steadily to 1.3 percent in Stage 5 (older couples with older children), then rises to 9.4 percent for elderly single persons. Renters are much more mobile than homeowners in every life-cycle stage; overall, half of Brown County's renters but only 7.4 percent of the homeowners moved during the preceding year.

Reasons for moving differ markedly by life-cycle stage. For those in Stages 1 and 2, setting up a household separate from parents and getting married are the major reasons for seeking a different place to live. In Stages 3 and 4, renters move into owned homes or seek larger quarters to accommodate their growing families. In Stages 5 and 6, older couples move in search of more convenient locations or better neighborhoods; and in Stage 7, elderly widows and widowers are often either physically or financially unable to maintain their former homes, seeking small apartments instead.

The First Year of Housing Allowances

Analysis of administrative records of the Brown County Housing Allowance Office for the first year of program operations enables us to characterize those who have enrolled in the program and to describe their experiences with it.

[pp. 98-103]

Client Characteristics. During that year, about 40 percent of the county's eligible households enrolled in the program. About 60 percent of those who enrolled were renters and 40 percent were homeowners, even though the number of eligible homeowners was probably larger than the number of eligible renters. Eighty percent of those who enrolled are either elderly single persons, single adults with children, or young couples with young children; these are also the largest groups of low-income households in the county. Overall, a third of the enrolled households are headed by elderly persons. Enrolled households tend to come from the lower range of eligible incomes—i.e., from among those most in need.

[pp. 103-104]

Allowance Schedules. Allowance entitlement varies with income and size of household. The median monthly entitlement of those enrolled in June 1975 was $44 for single persons, increasing to $113 for 60 households with nine or more members. The overall median was $57 monthly, or $684 annually, an amount that compares favorably with subsidies paid under other housing programs serving households in the same or even higher ranges of income.

[pp. 104-106]

Housing Expenditures. The allowance schedule is designed to enable participants to afford adequate housing in Brown County, the cost of which was estimated from a market survey conducted in September 1973. About a third of all renters receiving payments have found certifiable units whose costs are less than the standard amount. At least some of the others clearly have chosen to supplement their allowances with more than a fourth of their incomes in order to obtain housing of better quality than is required by program standards. For most household sizes, the median expenditure is 10 to 20 percent above the standard cost on which the allowance schedule is based.

[pp. 106-107]

Program Effects on Housing Costs. Although rents, home prices, and fuel and utility costs all undoubtedly increased during 1974 and the first half of 1975, there is no evidence that the allowance program contributed to housing price inflation in any significant way. Those most likely to be the agents of allowance-induced inflation are renters participating in the program, who might bid up the rents of certifiable housing, or whose landlords might raise rents on their units when they enroll. Yet their contract rents were remarkably stable during the program's first year.

For instance, there were 1,086 renters who were still in their preenrollment units at the end of June 1975. About 37 percent of these units had failed their initial housing evaluations, so that repairs were necessary before the occupants could receive allowance payments. Yet in June 1975, only 20 percent of these 1,086 households were paying higher rents than they paid at the time they enrolled; the median increase for those whose rents went up was 9.2 percent.

Only 144 renters moved between enrollment and the end of June 1975, 78 percent of them moving from units that failed their initial evaluations into units that passed. These households usually paid more rent for their new units than for their preenrollment units, but they also got better housing. Among the 92 whose rents increased when they moved, the median increase was 37.5 percent.

[pp. 107-113]

Housing Evaluations. The HAO completed 4,009 housing evaluations during its first year of operations, an average of 1.3 per household ever enrolled. Forty-three percent of the units submitted for evaluation failed initially; two-thirds of the failed units were subsequently repaired and reevaluated, nearly always passing on the second try.

Usually, only minor repairs were needed to bring a failed unit up to program standards. The most common reason for failure (39 percent) related to problems with stairs or handrails—hazards that can usually be remedied by an amateur carpenter

with a few dollars' worth of lumber. Other hazardous conditions accounted for 13 percent of the failure ratings, most of them being structural problems that would be costly to correct. Problems with natural light, ventilation, and plumbing facilities were also prominent among the reasons for failure.

A log of repair actions kept by the HAO for part of the first year indicated that the median cost of materials for 557 units that failed and were then repaIred and reevaluated was under $10; labor costs were not reported, but could hardly have exceeded $20. However, 38 cases of major repairs or improvements were reported; these included such measures as enlarging bedrooms, installing new electrical systems, repairing foundations, and installing new water heaters.

PRELIMINARY FINDINGS: ST. JOSEPH COUNTY, INDIANA

Because the key events of the Supply Experiment in Site II lag behind those in Site I by nine months to a year, we have much less to report about St. Joseph than Brown County. Some information about the housing market and the population of St. Joseph County is available from the screening survey conducted in July and August of 1974; and some information about the housing allowance program and its clients is available from monthly management information reports prepared by the HAO.

The Housing Market in 1974

St. Joseph County was selected as the second site for the Supply Experiment because its housing market appeared to contrast appropriately with Brown County's. For Site II, we sought a metropolitan area whose central city was decreasing in population or, at most, growing very slowly; and one where racial minorities formed a substantial fraction of the central-city population. Associated with these characteristics, we expected to find a surplus of older, deteriorating housing in the central city, a concentration there of low-income households, a racially segregated housing market, and a ring of more prosperous all-white suburbs.

[p. 118]

In choosing St. Joseph County, we were guided primarily by data from the 1970 Census of Population and Housing, and secondarily by what we could glean from site visits and local planning studies. Data from the screening survey confirm our understanding from these sources and indicate that housing-market trends reflected in the last two decennial censuses continued through 1974.

[pp. 119-125]

In August 1974, we estimate that there were about 69,000 residential properties in St. Joseph County with about 83,000 housing units on them. About 73 percent of the units were owner-occupied, and 23 percent were renter-occupied; the remaining 4 percent were vacant. The stock included nearly 3,500 federally subsidized units, of which 2,600 were rental units, 600 were cooperatively owned, and 300 were owner-occupied single-family homes. There were about 1,900 mobile homes.

The rental inventory is distinguished by the fact that there was very little construction of new rental housing between 1945 and 1965. Seventy-five percent of the unsubsidized rental units are on properties with four or fewer units, most of which began life as single-family owner-occupied homes. Recently, a number of garden-apartment complexes have been built on the fringes of the urban area, the

largest of which has over 700 units. Large multiple dwellings are thus either very new or predate World War II.

The county's 58,000 owner-occupied homes include many small cottages dating from the 1920s. On the current market, these are relatively inexpensive; our survey data indicate that about 5,000 such homes were valued by their owners at less than $10,000 and 15,000 were valued at less than $15,000. At such prices, even low-income households can aspire to homeownership, given assistance from the allowance program.

The large stock of older housing in the community and the sluggishness of the housing market there is reflected in the condition of the inventory. From the screening survey, we estimate that 25 to 40 percent of all rental units and about 10 percent of all owner-occupied units would fail an HAO housing evaluation, considerably higher fractions of the stock than in Brown County. The HAO's experience to date confirms this judgment; during the first nine months of program operations, 64 percent of the units submitted for initial evaluations failed, as compared with 43 percent in Brown County.

[pp. 125-127]

Recent Housing-market Trends

Countywide, the number of housing units changed very little in the interval between the 1970 Census of Housing and our 1974 screening survey. We estimate an overall increase of no more than 4,000 units in a period of 4.3 years, or about one percent per year. This growth is the net result of the addition of about 5,000 units (including 1,000 mobile homes) and the demolition of about 1,000 units.

[pp. 127-130]

Although our estimates are imprecise and their interpretation is complicated by changes in municipal boundaries, it appears that South Bend's housing inventory decreased by about 900 units between 1970 and 1974 and that a number of single-family houses that were previously owner-occupied are now renter-occupied. The inventory changes in Mishawaka are too small to have clear significance, given intervening annexations. Elsewhere in the county, the number of owner-occupied homes increased by about 8 percent.

Rental vacancy rates were high in 1970 and even higher in 1974. The rate in South Bend was over 8 percent in both years; in Mishawaka, it appears to have risen sharply from 6 to nearly 11 percent; elsewhere in the county, it rose from 3.5 to nearly 7 percent.

In both 1970 and 1974, the homeowner vacancy rate was relatively high in South Bend (1.6 to 1.7 percent) but low elsewhere in the county (0.5 to 0.7 percent).

Population Shifts Within the County

Events in the housing market reflect underlying trends in population distribution and composition. Since 1960 at least, the population of South Bend has been declining; the county's population has been growing, but only slowly. South Bend has lost about 3,200 households out of 43,600 since 1960, so it is not surprising that vacancy rates there are high.

[pp. 130-132]

South Bend's population losses appear to be mostly white, non-Spanish households, which decreased in number by 4 percent between 1970 and 1974. Partially offsetting these losses, the number of black households increased substantial-

ly; by 1974, there were over 5,000 black households in South Bend, accounting for 13 percent of all households and 15 percent of all persons. The number of Chicano-headed households is small—about 300—and does not appear to be growing.

The First Nine Months of Housing Allowance

[pp. 133-137] The housing allowance program in Site II is still in its formative stage, with only nine months of operating experience and only six months of open enrollment at the end of September 1975. However, the program appears to be developing differently there than in Site I, in several respects:

- *Public interest has been stronger in Site II.* Whereas the Brown County HAO received 3,100 preliminary applications duirng its first six months of open enrollment, the HAO in South Bend received 5,600. Although South Bend's population is about the same size as that of Brown County, it has had more experience with federal housing assistance and, we think, its low-income residents are readier to apply for allowances.
- *Enrollees' incomes are lower in Site II.* Only a seventh of all enrollees in Site I but a third of those in Site II had adjusted gross incomes of under $2,000. The median income of enrollees in Site I was $3,480 as compared with $2,730 in Site II. Consequently, allowance entitlements are higher in Site II, averaging $74 per month vs. $59 in Site I. The most striking differences are between renters in the two sites: The median income of those in Site II was only two-thirds of the Site I median and the average allowance payment was 41 percent larger.
- *Homeowners have been more willing to participate in Site II.* Whereas in Site I only 40 percent of those who have enrolled were homeowners, in Site II, 52 percent were homeowners. However, the Site II homeowners who have enrolled have had lower incomes than their Site I counterparts.
- *Forty-five percent of those enrolled in Site II are black and three percent are Chicano,* proportions that considerably exceed the incidence of black and Chicano households in the general population. (Minority enrollment in Site I is neglible because there are few minority households there.) We expect the racial composition of enrollment in Site II to shift as the program's jurisdiction expands to encompass all-white suburban areas.

PROBLEMS AND PROSPECTS

[p. 138] At the end of September 1975, the Supply Experiment had been in existence for nearly 3.5 years. The first eighteen months of that period were spent in designing both the experimental allowance program and the research program and in planning for their implementation. Field operations began in Site I early in 1973, and the allowance program there began open enrollment in mid-1974. Partly by design and partly by necessity, activities in Site II lagged behind those in Site I; field operations began early in 1974, and the allowance program began open enrollment in April 1975.

In neither site has the allowance program yet reached its plateau of enrollment, but both programs are well established and currently serve the housing needs of

substantial numbers of low-income households. Program administration is tightly organized, follows well-specified procedures, and is served by a machine records system that performs many routine clerical operations automatically and generates frequent and detailed statistical reports on each aspect of operations.

The research program has also matured during the past year. There is now a regular annual cycle of field surveys operating in each site, and HAO records are regularly batched and delivered to Santa Monica for analysis. In Santa Monica, Rand has developed and installed a machine-based record management system for maintaining the various survey samples, generating field materials, tracking the progress of fieldwork, and accounting for field reports. Survey instruments have been refined in substance and reformatted to make them easier to administer and more economical to process. We have also developed efficient and reliable procedures for converting hardcopy survey questionnaires and other field reports to machine-readable records, cleansing these records of errors and ambiguities, compiling them into well-documented research files, and auditing and analyzing the files. Analytical reports based on HASE data are at last emerging, complementing the design and planning documents produced at earlier stages.

Agenda for the Coming Year

The year ahead—from 1 October 1975 to 30 September 1976—promises to be the first in which nearly all HASE tasks will have precedents to guide them. In both the allowance program and the research program, we have entered a phase of largely repetitive operations, the challenge of which lies less in inventiveness under pressure than in coordination and control of a very large and complex but fairly stable enterprise. [pp. 138-141]

The Housing Allowance Program. Our main task in connection with the allowance program is to monitor the operations of each Housing Allowance Office to ensure that its actual policies and procedures conform to those agreed upon in the official handbooks; to provide it with technical assistance in planning, budgeting, operating procedures, and recordkeeping; to maintain consistency between the sites in program standards and their application; and to formulate new policies and program standards as the need for them arises, negotiating with HUD and the HAOs concerning their adoption. These tasks are generally the responsibility of HASE's Field and Program Operations Group, based in Washington but represented in each site by a site manager, who is also chairman of the HAO's board of trustees.

The Research Program. The research agenda is driven by the annual cycle of data collection in each site. The sequence of events connected with a single field survey occupies up to twenty-four months: revising the survey instrument; selecting or updating the survey sample; producing field materials for the survey; conducting the fieldwork; coding, keypunching, and cleaning the field reports; compiling a preliminary master file of machine-readable survey records; compiling a comprehensive codebook that interprets the recorded responses; auditing the file to determine the completeness and reliability of the data; documenting and archiving a permanent master file for the survey; analyzing the data pursuant to research objectives; and writing, editing, and producing reports. These functions are divided among five functional groups based in Santa Monica, a small survey operations staff in Washington, and two survey subcontractors with field offices on site.

At any given time, up to three annual waves for a particular survey and site may be occupying the attention of one or another of the HASE research groups. Since there are three major surveys (of landlords, of tenants and homeowners, and of residential buildings) entailed in the annual cycle for each site and a fourth (of neighborhoods) which is conducted less often, the requirements for intergroup coordination and careful scheduling of work are considerable. In addition to the field surveys, there are quarterly deliveries of administrative records from the HAOs to be consolidated annually into research files that must also be audited, analyzed, and archived.

During the coming year, fieldwork for the third wave of surveys in Site I and the second wave in Site II will be conducted, and much of the data will be prepared for audit and analysis. Data from the preceding wave in each site will be audited and analyzed. Preparations for the subsequent wave in each site will begin during the summer of 1976. Administrative records for the first year of housing allowances in Site II and the second year in Site I will be audited and analyzed.

Problems and Uncertainties

As the agenda indicates, we expect to be busy during the coming year, even if all goes smoothly. We must also be prepared to deal with a variety of problems, some now present or foreseeable, others not. Below, we list the major issues that we expect will engage our attention and HUD's during the coming year.

[pp. 141-143]

Administering the Allowance Program. Uncertainties about the eventual sizes of the experimental allowance programs in each site impinge on administrative planning. Our estimates of the numbers of eligible households in each site are imprecise, and we cannot foretell exactly the eventual participation rates among those who are eligible, the speed with which those enrolled will find acceptable housing and thus qualify for payments, or the effects on enrollment of possible changes in eligibility rules or benefit levels; and in Site II, we must consider the effects of the possible expansion of program jurisdiction to include Mishawaka and the outlying parts of the county.

We are confident that program funding under the annual contributions contract is adequate to enable open enrollment to continue in each site for the coming year. However, the pace of enrollment and the eventual number of enrollees strongly affects administrative costs of the program. As program size has increased, administrative costs per enrollee have dropped sharply; and there is evidence that initial enrollment is considerably more expensive than routine service to a client who is already enrolled and living in approved housing. FPOG and the HAOs are now engaged in cost analyses that will enable us to better understand the structure of present costs and their applicability to a national program. Improvements in cost control systems as well as cost-reducing procedural changes are anticipated.

[pp. 143-144]

Evolution of the Research Design. Over time, the emphasis of HASE research will undoubtedly shift as HUD and Rand review findings that suggest new questions about the effects of the experimental housing allowance programs, or as new issues of federal housing policy enter the arena of public discussion and it is perceived that data from the Supply Experiment can clarify them. However, we do not now foresee basic changes in the research design, whose conceptual soundness

has been repeatedly tested by extermal reviews and which is now embedded in a data collection program whose feasibility is established.

The principal design issue yet to be resolved is the duration of the experiment. Although the allowance programs themselves are firmly committed for ten years, the plan for six annual cycles of data collection in each site could be curtailed if early findings about program effects were conclusive, or if it appeared unlikely that later cycles would add substantially to our understanding of the longrun effects of the program.

Rand and HUD have agreed to review this issue for each site separately, following the completion of the third wave of surveys. For Site I, the review is planned for the summer of 1976.

Improvements in Operating Procedures. There are few precedents for a survey research project as large and as complex as the Supply Experiment. Over the past two years, Rand and its survey subcontractors have worked out systematic methods for sample selection, instrument production, survey record management, field scheduling, data preparation, file management, survey audit, and analysis of survey and HAO data. During the coming year, we expect to further improve these methods, especially instrument formats, survey record management, cross-module data cleaning, and file management. [pp. 144-151]

Several issues concern us still. One is the problem of maintaining adequate response rates in our panel surveys; we have done very well in two waves in Site I, but only adequately in Site II, which is a more difficult environment for survey research. The survey of residential buildings, which entails direct observation and judgments about building quality and condition, continues to present reliability problems despite instrument redesign. Although audit and analysis of survey data is proceeding expeditiously, the publication of reports has lagged badly, due sometimes to delays in drafting, sometimes to delays in reviewing and revising first drafts prior to publication.

PROSPECTS

Manifestly, the problems and uncertainties discussed above are minor issues in the overall scheme of the Supply Experiment. We fully expect to resolve those that are at all tractable and to learn to live with the residual uncertainties. Our main concern is to stay alert for new problems, recognizing and dealing with them promptly as they arise. [pp. 151-152]

During the coming year, we expect to analyze baseline survey data for Site II as well as the second wave of survey data for Site I. Comparing and contrasting Site II with Site I will greatly enrich our understanding of both and will serve to forestall many facile generalizations to which we might be led by data from one site only. For Site I, we will enter a new phase of time-series analysis, comparing preallowance and postallowance survey data. Each year thereafter, we foresee expanding analytical horizons as observations accumulate and the allowance program in each site reaches maturity.

We think the prospects are excellent for completing the experiment on schedule and according to plan; and that much will be learned from it that not only serves the immediate purposes of HUD's Experimental Housing Allowance Program but also informs deliberations on other aspects of federal housing policy.

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I. INTRODUCTION AND OVERVIEW

The Housing Assistance Supply Experiment (HASE) is one among several elements of the Experimental Housing Allowance Program undertaken by the Office of Policy Development and Research, U.S. Department of Housing and Urban Development (HUD). The program is intended to help HUD decide whether a national program of direct financial assistance to low-income households is a feasible and desirable way to help them secure decent housing in a suitable living environment; and if so, to help determine the best terms and conditions for such assistance and the most efficient and appropriate methods for administering a nationwide program.[1]

ELEMENTS OF THE EXPERIMENTAL HOUSING ALLOWANCE PROGRAM

Most federal programs of housing assistance for low-income families channel public funds directly to a local housing authority, a private landlord or developer, or a mortgage lender, to help support specific housing units to be occupied by low-income tenants. A contractual agreement between the federal agency and the supplier of housing services usually regulates both the services to be provided to the tenants and the price the tenants may be required to pay for them.

A housing allowance program would operate differently. Public funds would be granted directly to low-income families, who would then use their increased resources to buy services in the local housing market. The intent of such a program would be to enable recipient families to afford an adequate level of housing consumption without depriving themselves of a reasonable standard of living in other respects.

It is thus important to anticipate how recipients would respond to the opportunity afforded them by a housing allowance. For most, the allowances would function as rent supplements, the recipients also contributing toward the cost of their housing. Depending on the form of the allowance (cash grant, rent certificate) and its terms (percent of actual rent, percent of income), and on the restrictions placed on the housing a recipient may occupy (rent level, quality level), the public contribution could be made nonfungible, partially fungible, or entirely fungible with the remainder of the recipient's resources, and he would be given more or less discretion in choosing his level of housing expenditures.

To learn how recipients respond to alternative amounts and forms of assistance, HUD has sponsored a Housing Assistance Demand Experiment as one part of its experimental program. Briefly, this experiment entailed selecting a sample of about 1,500 low-income renters in each of two large metropolitan areas[2] for enrollment in a housing allowance program. Subsamples of the enrollees are receiving allowances

[1] Office of Policy Development and Research, U.S. Department of Housing and Urban Development, *First Annual Report of the Experimental Housing Allowance Program*, Washington, D.C., May 1973, pp. i-ii.

[2] Pittsburgh, Pennsylvania, and Phoenix, Arizona.

on different terms, as suggested above, and their housing choices and budgetary decisions are being monitored for three years.

Because the number of allowance recipients is small relative to the total population—or even to the total low-income population—of the housing markets in which the Demand Experiment is operating, these markets will not be noticeably perturbed by the allowance program. Neither suppliers of housing services, nor market intermediaries, nor nonrecipient families are likely to be aware of, or significantly affected by, the efforts of allowance recipients as a group to obtain better housing. Although these circumstances serve the specific purposes of the Demand Experiment, they also make it different from a national program of housing allowances, which would enroll all low-income families who chose to participate.

The second element of HUD's experimental program, the Supply Experiment, is designed to test the market's response to a *fullscale* allowance program. Such a program has been mounted in two metropolitan housing markets,[3] selected for their contrasting market characteristics. In each case, housing allowances are being offered for ten years to most of the low-income families who would probably be eligible under a national housing allowance program; we anticipate enrolling 12 to 15 percent of all households in each market.[4] The local housing market is being monitored to see what happens when program participants try to turn their augmented resources into higher levels of housing consumption.

The third element of HUD's experimental program is the Administrative Agency Experiment, which is designed to explore the advantages and disadvantages of alternative institutional and administrative arrangements for delivering allowances to low-income households. For this purpose, HUD has contracted with eight different agencies—local housing authorities, metropolitan governments, state housing agencies, and welfare agencies—to plan and operate two-year allowance programs for renters within their jurisdictions.[5] Within a basic framework of program definition, each agency has wide latitude in designing and administering its own program. The agencies' experiences and operating costs are being monitored to guide HUD on issues of program design.

RESEARCH OBJECTIVES OF THE SUPPLY EXPERIMENT

All of the experiments in the Experimental Housing Allowance Program are intended to provide information bearing both on the best design of a national program of housing allowances and on the merits and demerits of such a program as a means of improving the housing conditions of low-income families. HUD's decision to mount *separate* Demand, Supply, and Administrative Agency experiments is

[3] Brown County, Wisconsin, whose central city is Green Bay; and St. Joseph County, Indiana, whose central city is South Bend. In the latter case, the allowance program was initially restricted to the city of South Bend, but its jurisdiction has since been expanded; see Sec. III, below, for details.

[4] Naturally, the results of both the Demand and Supply experiments are likely to modify a priori judgments as to who should be eligible for housing allowances under a national program. The point is simply that those eligible to participate in the Supply Experiment will constitute a substantial fraction of the metropolitan population and will include most of those who, under any reasonable standard, would be eligible under a national program.

[5] The jurisdictions are Salem, Oregon; Tulsa, Oklahoma; Jacksonville, Florida; San Bernardino County, California; Springfield, Massachusetts; Peoria, Illinois; Burleigh, Stutsman, Morton, and Stark counties, North Dakota; and Durham County, North Carolina.

motivated by considerations of efficiency. Each experiment is designed to answer specific questions and to capture specific kinds of information; the various findings are to be integrated analytically. HUD has assigned the integrative role to the Urban Institute, which participated in the design of all three experiments and will have access to the data they produce. Their work will include cross-experimental comparisons of program effects on participants and their housing, analysis of alternative combinations of program features not directly tested, and extrapolation of experimental findings to a national level.

The mission assigned to the Supply Experiment is to provide reliable and credible answers to four clusters of questions about the effects of a national housing allowance program:

1. *Supply responsiveness.* How will the suppliers of housing services—landlords, developers, and homeowners—react when allowance recipients attempt to increase their housing consumption? Specifically, what mix of price increases and housing improvements will result? How long will these responses take to work themselves out to a steady state? How will the responses differ by market sector?
2. *Behavior of market intermediaries and indirect suppliers.* How will mortgage lenders, insurance companies, and real estate brokers respond to an allowance program? Will their policies help or hinder the attempts of allowance recipients to obtain better housing and those of landlords to improve their properties? What happens to the availability, price, and quality of building services and of repair and remodeling services? What seem to be the reasons for changes in institutional or industrial policies?
3. *Residential mobility and neighborhood change.* In their attempts to find better housing (or better neighborhoods), will many allowance recipients relocate within the metropolitan area? What factors influence their decisions to move or to stay? What types of neighborhoods will the movers seek and succeed in entering? Do moves by allowance recipients set in motion a chain of moves by nonrecipients—either into neighborhoods vacated by recipients or out of neighborhoods into which recipients have moved?
4. *Effects on nonparticipants.* How will households not receiving housing allowances—particularly those whose incomes are within or just above the range of eligibility—be affected by the program? Specifically, will the increased housing demands of allowance recipients cause an increase in housing prices for nonrecipients? Whether or not such price increases occur, will nonrecipients perceive personal hardships or benefits from the program? How will they perceive and react to allowance-stimulated neighborhood changes?

The answers to these questions are interdependent. Whether a landlord chooses to raise rents, and whether he also chooses to offer his tenants improved housing, depends on his perceptions of changes in market demand and of the alternatives available to his tenants. To undertake capital improvements, he usually must seek mortgage financing. The mortgage lender must judge that the future stream of revenues will be adequate for debt service, that foreclosure would not result in capital loss, and that the property is and will continue to be insurable against damage or destruction. The extent to which their landlords raise rents and/or

improve facilities and services will affect allowance recipients' decisions to stay or to seek other quarters better suited to their augmented budgets and housing preferences. If they seek better housing elsewhere, they are likely to be competing with nonrecipients for housing that was previously beyond their means.

Furthermore, the answers to these questions are likely to change over time. Those initially enrolled in a housing allowance program are unlikely to react immediately or simultaneously to their augmented housing budgets, so that the demand signals to landlords and developers will be delayed and at first unclear. The landlords will also need time to respond—whether with rent increases or housing improvements—and as market signals clarify, their responses may change. The actions of landlords and developers may, in turn, modify the perceptions and policies of market intermediaries and financial institutions. All these events, in time, may perceptibly change the alternatives open to allowance recipients and the consequences of their choices for others (e.g., nonrecipients).

Finally, different groups within the relevant populations of landlords, of financial institutions, of allowance recipients, and of nonrecipients are likely to respond differently to a given stimulus, so that an "average" response may conceal important information. The structure and initial condition of the local housing market may also influence response patterns. The incidence of rental tenure (or of ethnic minorities) may condition responses by both renters and owners (or by blacks and whites). A market initially characterized by excess demand would respond differently from one characterized by excess supply.

Thus, though the questions can be phrased simply, the answers are likely to be both complex and highly dependent on local circumstances. No feasible set of experiments can embrace all plausible variations in circumstances or trace out all consequences. Yet if a national program of housing allowances is a serious possibility, some information about its probable consequences is manifestly better than none, and limited empirical evidence can be extended analytically to predict the unobserved. Sites for the Supply Experiment were carefully selected for contrast in market structure; and data from these two sites will be supplemented in the integrated analysis by data from the ten sites in which the Demand and Administrative Agency experiments are being conducted.

ORGANIZATION OF THE EXPERIMENT

Under contract to HUD's Office of Policy Development and Research, The Rand Corporation worked with HUD to design both an experimental allowance program and an agenda of research for the Supply Experiment. The allowance program will operate for ten years in each experimental site. During (approximately) the first five years, Rand will monitor and supervise its operations; over this same five-year period, Rand will also gather and analyze data concerning the effects of the allowance program on the local housing market. Generally, program and research activities are jointly planned but separately administered.

Appendix C summarizes the administrative organization of the Supply Experiment, for both its program and research functions. Below, we describe the substantive aspects of each.

THE EXPERIMENTAL SITES

The Supply Experiment is being conducted in two contrasting metropolitan housing markets. Site I is Brown County, Wisconsin—a Standard Metropolitan Statistical Area (SMSA) whose central city is Green Bay. Site II is St. Joseph County, Indiana, a portion of an SMSA whose central city is South Bend.[6] Both are self-contained housing markets in that their boundaries are drawn through thinly populated territory at some distance both from their own central cities and from other population centers.

These places were selected from all the nation's SMSAs by a multistage screening process reflecting basic requirements of experimental design and constraints on program funding. Design considerations led us to search for housing markets which were likely to respond differently to the experimental allowance program yet were each typical of a substantial portion of all metropolitan housing markets. Available program funding limited the choices to markets with populations of under 250,000 persons (about 75,000 households) in 1970, the size and cost of the experimental allowance program depending on the number of eligible households within the program's jurisdiction.

Brown County was selected as representative of metropolitan housing markets with rapidly growing urban centers (hence with relatively tight housing markets) and without large racial minorities (hence minimal problems of residential segregation or housing discrimination). St. Joseph County was selected as representative of another group, metropolitan housing markets that have unstable or declining urban centers which contain large, growing populations of blacks or other disadvantaged minorities. This combination characteristically leaves low-income minority households concentrated in deteriorating central-city neighborhoods that have an excess supply of older housing, while new housing is built mostly in surrounding all-white suburbs.[7]

Although no two metropolitan areas can reflect all the important combinations of housing-market features, we believe that these two offer powerfully contrasting envirionments for the experimental housing allowance program. By observing and analyzing similarities and differences between these sites in market responses to the program, we expect to be able to judge the pertinence of the housing allowance concept to housing problems in other metropolitan markets.[8]

THE ALLOWANCE PROGRAM

The Demand Experiment is testing a carefully designed range of program features, and the Administrative Agency Experiment provides broad latitude to local agencies in program design. The Supply Experiment, in contrast, will operate identi-

[6] The remainder of the SMSA is Marshall County, which contains no large cities. As explained in Sec. III, the allowance program for Site II operated initially only in South Bend.

[7] The population and housing characteristics of our two experimental sites are discussed further in Secs. IV and V.

[8] To assist in the application of experimental results to larger SMSAs, we have suggested that HUD consider a third experimental site, consisting of a low-income neighborhood in a large metropolitan area, with enrollment in the allowance program restricted to that neighborhood. However, we are advised that funding for any such addition would be difficult to obtain. As noted above, data from the Demand and Administrative Agency experiments should help with problems of generalization.

cal experimental allowance programs at each of its two sites; and within each site, housing allowances will be available to all eligibles on essentially the same terms and conditions.

The features to be tested in the Supply Experiment were chosen as a first approximation to those of a national program with fullscale participation. By selecting sites with contrasting market characteristics, we hope to learn how different housing markets will respond to the same general program. The key features of our experimental program are summarized below.

Program Administration

The experimental allowance program is administered in each site by a Housing Allowance Office (HAO), a nonprofit corporation whose trustees include members of The Rand Corporation and local citizens. At the end of a five-year monitoring program, it is expected that the HAO will operate entirely under local control.

Funds for the program come from a ten-year annual contributions contract between HUD and a local housing authority, pursuant to Sec. 23 of the U.S. Housing Act of 1937, as amended. The local housing authority in turn delegates operating authority for the program to the HAO.

Assistance Formula

The amount of assistance offered to an eligible household is intended to enable that household to afford well-maintained existing housing with suitable space and facilities for family life, free of hazards to health or safety. A local market study conducted by Rand in each site provides an estimate of the "standard cost of adequate housing" for each size of household. Allowance payments fill the gap between that amount and one-fourth of the household's adjusted gross income, with the constraint that the amount of assistance cannot exceed the actual cost of the housing services consumed by a participant.

Eligibility for Assistance

A household is eligible to participate in the allowance program if it consists of (a) one person, either elderly (62 or over), handicapped, disabled, or displaced by public action, or (b) two or more related persons of any age; provided also that current income and assets are within specified limits and that the household does not already receive equivalent assistance under another federal housing program. The income limit is set by the assistance formula itself: When adjusted gross income exceeds four times the standard cost of adequate housing for a given household size, allowance entitlement drops to zero. The net asset limit is $32,500 for households headed by elderly persons and $20,000 for others.

Adjustments to gross income generally follow those of the federal public housing program, with deductions for work-related expenses and for dependents and elderly persons. Transfer income (e.g., public assistance and social security) is included in gross income. An unusual feature of the program is that the asset ceiling has been set relatively high, so as to avoid excluding homeowners with low current incomes. However, gross income is calculated to include imputed income from home equity and other real property that does not yield a cash flow, so that the allowance entitlement decreases for larger holdings of such assets.

Housing Choices

Program participants may be either renters or homeowners, and they may change their tenure or place of residence (within the boundaries of the experimental site) without affecting their eligibility for assistance. Participants are encouraged to seek the best bargains they can find on the private market, negotiating terms and conditions of occupancy with the landlord or seller. They are provided with market information (if they request it), informed of their rights under equal opportunity laws, and offered assistance in obtaining these rights (if necessary); but they are not directed to particular neighborhoods or types of housing or required to spend specific amounts, except as noted below.

The use of allowance payments by program participants is constrained in two ways. First, in order to receive monthly payments, a participating household must occupy a housing unit that meets standards of adequacy, a requirement enforced by periodic evaluations conducted by the HAO. Second, the participant must spend at least the amount of his allowance for housing services (contract rent and utilities for renters; mortgage interest, property taxes, insurance, maintenance and repairs, and utilities for homeowners).

Since the allowance entitlement for all but the poorest households is less than the estimated standard cost of adequate housing, the first provision is the most significant. A participant who finds certifiable housing at less than standard cost will not need to contribute a full 25 percent of his nonallowance income to cover his housing costs. On the other hand, if he chooses a unit with costs that are above standard, he will not receive any additional payment but must bear the excess cost from nonallowance income. Thus, the allowance formula provides an incentive to seek housing bargains, while the minimum standards provision ensures that the program's housing objectives will be met by all participants.

Assistance to Renters

A renter household enrolling in the allowance program must submit evidence of income and household size, on which the amount of its allowance entitlement is based. The household may continue to reside in the unit it occupies at the time of enrollment or it may seek another unit, as long as the unit meets program standards. Once the HAO has certified the housing unit and has received a copy of the lease agreement between the tenant and landlord, it begins issuing monthly allowance checks to the head of the household. It reviews income and household size every six months, adjusting allowance payments accordingly; and it reevaluates the housing unit annually, suspending payments if the unit falls below program standards.

The amount of contract rent and the responsibility for utility costs are a matter between the landlord and tenant, as are the enforcement of lease provisions and the resolution of disputes. The HAO has no contractual relationship with the landlord. In the event that a housing unit becomes uncertifiable while it is occupied by a program participant, it is the participant's responsibility to work with the landlord to correct the deficiencies or else to find other quarters that meet program standards.

Assistance to Homeowners

Assistance to homeowners follows as nearly as possible the format of assistance

to renters. However, prior to October 1975, a nominal landlord-tenant relationship between the HAO and the homeowner was created by means of a lease-leaseback agreement. This agreement did not alter the locus of title to the property and could be terminated by the homeowner at any time. While it was in effect, the homeowner received monthly assistance checks subject to the same conditions that applied to renters and had full responsibility for the maintenance of his property and for insurance, property taxes, and any outstanding mortgage obligations; the HAO had no obligations to the mortgage holder.

The lease-leaseback agreement was designed so that homeowners could be assisted under the provisions of Sec. 23 of the U.S. Housing Act of 1937, as amended prior to the time the allowance program was implemented. However, the Housing and Community Development Act of 1974 amended Sec. 23 in a way that allows direct assistance to homeowners in the experimental program. In September 1975, the lease-leaseback requirement was accordingly terminated and homeowners now receive monthly allowance payments without this formality.

Assistance to Home Purchasers

Although home purchase is an option open to those enrolled in the allowance program, we do not expect it to be exercised often, because of financial constraints. Even with program assistance, eligible households will not ordinarily be able to afford new single-family homes; their ability to purchase older homes will depend on their liquid assets and on the availability of mortgage credit on terms they can afford.

The experiment will test whether lenders will consider ten years of allowance entitlement a sufficient income supplement and stabilizer to warrant extending mortgage credit to households for whom it is not now usually available. In addition, local or state assistance to low-income home purchasers may be used to supplement the housing allowances.

RESEARCH DESIGN

The experimental housing allowance program described above is designed to enable low-income households at each site to increase their housing expenditures on the private market and to encourage housing improvements by both landlords and homeowners. The attempts of program participants to obtain better housing with their augmented resources should act as a market stimulus whose consequences—good or bad—will be measured and analyzed.

As indicated earlier, the research charter of the Supply Experiment focuses on four interrelated clusters of questions concerning supply responsiveness, the behavior of market intermediaries, residential mobility and neighborhood change, and effects on nonparticipants. We have designed a five-year agenda[9] of data collection and analysis that we believe will provide reliable answers to these questions for each

[9] Five years is our best a priori estimate of the time needed for market processes set in motion by the introduction of the allowance program to approach some new equilibrium. However, evidence gathered along the way may suggest that a shorter monitoring period is adequate or that a longer period is needed to answer policy-related research questions reliably.

experimental site; supplemented by data from the Demand and Administrative Agency experiments, these data will also provide a basis for extending and generalizing the site-specific findings.

Our plans require both operating data from the experimental allowance program and concurrent data on events in the local housing market. Though gathered by different means, the two kinds of data will be analyzed jointly.

Monitoring the Allowance Program

We are following the experimental housing allowance program primarily through periodic analyses of administrative records provided to Rand by the HAO at each site. These records, which are purged of personal identification, include enrollment applications, certifications and periodic recertifications, histories of allowance payments and other administrative actions, and housing evaluations for units occupied or nominated for occupancy by program participants.

Although administrative procedures have been designed, with few exceptions, to obtain only information needed for program administration, the various records provide considerable information on the characteristics of applicants and allowance recipients, their housing conditions and expenditures at the time of enrollment, and subsequent changes in income, household composition, housing characteristics, and housing expenditures. They also provide useful data on applicants who were declared ineligible (e.g., reasons for ineligibility) and on those who were declared eligible but finally declined to participate.

Monitoring the Housing Market

Although administrative records of the allowance program provide measures of its market *stimulus*, data on the market *response* come primarily from an annual cycle of field surveys addressed to the owners and occupants of a marketwide sample of residential properties.

The sample design provides for probability sampling in each of eighteen strata of residential properties distinguished by location (urban vs. rural), tenure (rental vs. ownership), size (number of housing units), and cost (gross rent or estimated market value). Altogether, we propose to empanel approximately 2,000 properties in each site, collecting data for each property at baseline (before the beginning of the allowance program) and annually thereafter during the projected experimental period of five years. Each year, the panel will be augmented by a sample of properties that have been newly converted to residential use. Within the limits of sampling reliability, the data will support generalizations about the entire population of residential properties in each site.

The annual cycle of field surveys is thorough and complex. Its main elements are the following:

Survey of Residential Buildings. Each property in the sample is being examined annually in the field to record the physical characteristics of its residential buildings and the general characteristics of the immediate neighborhood. The survey instrument is designed to enable us to detect alterations or improvements, changes in the physical condition or use of the property, and changes in the neighborhood that occur between annual surveys.

Survey of Landlords. For each rental property in the sample, we are seeking an annual interview with the landlord. This interview, running about 90 minutes, is designed to obtain a record of his rental revenues and outlays for building maintenance and operations during the preceding year, including a detailed account of repairs and improvements and their costs. It also seeks data on mortgage financing, property ownership and management, property and tenant characteristics, landlord-tenant relationships, and plans for the property. Now that the allowance program is under way, the annual interview will also try to elicit the landlord's impressions of the program and how it affects him.

Survey of Tenants and Homeowners. For rental properties in the sample, we are also seeking annual interviews with the current occupants of up to four housing units on each property. Each household head is asked to describe the interior features and condition of his housing unit and to report his contract rent and other housing expenses. He is also asked to give his views on his housing and his neighborhood. As background for analysis of these housing-related responses, he is asked for information on household composition and family characteristics, income, education, and occupation. An important element of the first interview for each household head is a five-year residential and employment history, which includes data on household, housing, and employment characteristics at the time of each move.

The interview for homeowners covers similar ground but also includes detailed questions on mortgage financing and housing expenses similar to those addressed to landlords.

With the allowance program now under way, the annual interview for tenants and homeowners will update information obtained at baseline and also try to elicit the respondent's perceptions of the program and its effects on his housing and neighborhood. Inasmuch as the sample includes both program participants and nonparticipants, both views will be represented.

Finally, a subsample of urban renter households that are eligible to enroll in the allowance program is being followed if they move from empaneled housing units. They are interviewed at their new addresses to obtain information more directly comparable with that gathered in the Demand Experiment.

Survey of Neighborhoods. In addition to annual observations on the immediate environs of each property in the sample (see "Survey of Residential Buildings," above), we are gathering data at less frequent intervals on larger neighborhoods within each site. We have divided Brown County into 108 neighborhoods and St. Joseph County into 86, on the basis of homogeneity of land use and housing characteristics, considering also the strength of natural boundaries. Detailed information on land use, access to public facilities, amenities, and the condition of housing and of streets and other public areas has been gathered at baseline and will be sought at thirty and sixty months thereafter. These data should help explain differences in the views and behavior of the landlords and tenants of sample properties within each neighborhood.

Survey of Market Intermediaries. Independently of the surveys addressed to the panel of residential properties, we have undertaken annual surveys of the activities and policies of market intermediaries in each site—specifically, mortgage

lenders, real estate brokers, insurance firms, and home improvement contractors. The formality of these surveys varies, with the most systematic data being collected from mortgage lenders.

Resident Observer. The systematic surveys are supplemented at each site by a resident observer, who gathers informal information about community events, activities, and attitudes that may bear on the housing allowance program. His reports help us to interpret survey findings and flag issues that warrant additional research by Rand staff or that need attention from the HAO.

Background Data on Housing Costs and Links to Other Surveys

To supplement the data collected within each experimental site, we are drawing on existing statistical systems for regional and national background data with which local data may be compared. Specifically, we are compiling a regional price index for factors used in the production of housing services against which changes in local prices can be compared; and we will link our data on housing-market trends to those collected by the U.S. Bureau of the Census in its Annual Housing Survey.

ANALYSIS PLAN

The techniques for analyzing the data described above are too complex to be detailed here. We should note, however, that the agenda of data collection, including both the design of the sample of residential properties and the contents of the survey instruments, reflects well-specified analytical requirements relating to the four clusters of research issues mentioned above.[10]

Perhaps the most difficult technical problem of the Supply Experiment has been to develop instruments and analytical techniques for measuring changes in the real flow of housing services from individual properties (and for the market as a whole) after the introduction of the housing allowance program; to disentangle these changes from concurrent changes in the prices of housing services; and to determine to what extent changes of both types are attributable to the allowance program as distinguished from other local, regional, or national events.

Our methods for accomplishing these tasks are promising, although their success necessarily depends in part on the cooperation of survey respondents and on as-yet-unknown characteristics of the data. Analysis of baseline data for Site I, reported in Sec. IV, and preliminary accounting for the second wave of surveys there encourage us to believe that the data we seek are indeed both obtainable and analyzable.

REPORTING EXPERIMENTAL FINDINGS

The duration of the Supply Experiment is extremely important, whether expressed in terms of the experimental allowance program (ten years) or in terms of the scheduled monitoring program (projected for five years).

[10] See Ira S. Lowry (ed.), *General Design Report: First Draft*, The Rand Corporation, WN-8198-HUD, May 1973, Secs. V through X and Appendixes A through F.

The ten-year allowance program stabilizes the expectations of market participants, enabling them to behave nearly as they might under a permanent national program. Thus, a landlord contemplating improvements to his property will know that allowance-assisted tenants will be able to afford the higher rents needed to amortize improvements over their useful life, up to ten years. An eligible homeowner can similarly plan on program support for a period long enough to amortize improvements. An eligible tenant contemplating a move to better and more expensive housing will know that his allowance-augmented resources will support the higher level of housing expenditures for more than a brief interval.

The projected monitoring period of five years enables us to follow an allowance-stimulated housing market long enough to comprehend its dynamics. The total of six annual observations enables us to observe more than temporary response or lack of response by the market to program-provided stimuli.

A corollary of these propositions, however, is that the final returns from the Supply Experiment will not be available before 1981. It is reasonable to wonder whether findings so long delayed will really influence federal policy on housing allowances.

The pace of federal action on this issue is hard to predict. However, experience with other major policy initiatives in the field of social welfare suggests that the legislative process could easily occupy two to five years. If a national program were to be passed by Congress, another year or two of administrative planning would surely be needed to turn the statute into an operating program.

In the meantime, each year brings a new increment of information bearing on the merits of the general proposal and on specific problems of program design and implementation. Moreover, the data on housing-market dynamics gathered by the Supply Experiment are pertinent to a broad range of federal policy options, not just to housing allowances. Indeed, we believe that the data files of the Supply Experiment will be a permanent national resource for housing policy analysis.[11]

In any event, we have planned the research agenda so that useful information will be available to HUD and to others each year. Even the baseline surveys, conducted in each site before the experimental allowance program begins, will provide programmatically valuable information about the ownership, management, financing, and cost of rental housing. The first year's accumulation of program data, combined with returns from the second wave of surveys, should resolve many uncertainties about the startup problems of a national program and about the initial market response to it (as reflected in rents and housing improvements). Thereafter, the scope and power of experimental evidence bearing on policy issues increases annually.

Because of the volume of survey data to be processed and analyzed, we anticipate a lag of nine to twelve months between the completion of each cycle of fieldwork and

[11] The HASE survey files are virtually unique in being based on marketwide probability samples of residential properties, in reporting comparable data for homeowner and rental properties, and in reporting on both landlords and tenants of specific rental properties. The amount of detail obtained on property financing and on operating income and expenses is unparalleled except for a few small, nonrepresentative samples of large rental properties.

Work now under way at Rand indicates that the data will serve path-breaking analyses of rental property ownership, finances, and management; homeowner housing expenses; housing service production functions; vacancy and turnover processes; the dynamics of housing choices over time for individual households; and residential mobility patterns. We believe that many more issues can be productively addressed with these data than are encompassed by the HASE research charter.

the publication of the first analytical reports based on the new data. As we proceed through annual cycles, we expect to become more proficient at our tasks, but the tasks themselves become in many respects more difficult as time-series accumulate.

Preparation of this second annual report on the experiment comes as we are completing the analysis of Site I baseline survey data and HAO records for the first program year. For Site II, analysis of baseline data is just beginning, and analysis of HAO data is scheduled to begin early in 1976. At that time, we also expect to begin analysis of data from the second wave of surveys in Site I.

The *First Annual Report*[12] described the two experimental sites and their housing markets, drawing on the 1970 Census of Population and Housing and on local sources of data other than our surveys. It also described in considerable detail the processes of site selection, program implementation, and survey fieldwork in each site through September 1974.

Here, we continue the account of program implementation and survey fieldwork in the two sites through September 1975. In addition, we report findings from our analyses of survey and HAO records in each site. Because events in Site II lag about a year behind those in Site I, we have more to say about Site I. Findings for Site II will be a major topic in next year's annual report.

HISTORICAL BACKGROUND FOR THIS REPORT

The Housing Assistance Supply Experiment may be conveniently dated from October 1971, when HUD invited Rand to prepare a design study to complement work done by the Urban Institute on what later became the Demand Experiment. Our report[13] was submitted in December 1971; in April 1972, HUD contracted with Rand for Phase I (the planning phase) of the Supply Experiment.

The following eighteen months were spent principally on site selection, elaborating the research design, and planning the experimental housing allowance program.

Brown County, Wisconsin, was designated as the first of two experimental sites on 22 December 1972; selection of the second site, St. Joseph County, Indiana, was delayed until 8 April 1974, for reasons discussed in the *First Annual Report.*

A draft of the research design[14] was submitted to HUD in May 1973; it was reviewed by HUD and by an outside committee of experts during the summer of 1973 and, with revisions, was accepted by HUD and Rand as the basis for the Supply Experiment on 17 October 1973.

A draft of the program design[15] was submitted to HUD in August 1973 and was also accepted by HUD and Rand on 17 October 1973, subject to resolution of legal difficulties relating to the use of Sec. 23 funds to assist homeowners. These difficulties were not finally resolved until 6 February 1974.

Phase II of the Supply Experiment (the operating phase) may be conveniently

[12] *First Annual Report of the Housing Assistance Supply Experiment*, The Rand Corporation, R-1659-HUD, October 1974.

[13] Ira S. Lowry, C. Peter Rydell, and David M. de Ferranti, *Testing the Supply Response to Housing Allowances: An Experimental Design*, The Rand Corporation, WN-7711-UI, December 1971.

[14] Lowry, *General Design Report: First Draft.* Related working notes detailing various aspects of the research design are listed in Appendix A to the present report.

[15] Robert Dubinsky (ed.), *The Housing Allowance Program for the Supply Experiment: First Draft*, The Rand Corporation, WN-8350-HUD, August 1973.

dated from 5 March 1973, when Rand opened its site office in Brown County. It thus overlapped the planning phase by some months.

The historical portions of the first annual report focused on the period from the beginning of Phase II through September 1974. The historical portions of this second annual report deal essentially with the second period of Phase II, beginning in October 1974 and running through September 1975. In the next section, we review the sequence of events in the first experimental site during that period. Section III provides a similar review of operations in the second site.

II. PROGRESS IN SITE I

During the past year (October 1974 through September 1975), both the housing allowance program and the research program in Brown County have completed their formative stages and settled into routine operations that should continue for the duration of the experiment.

In the fifteen months since the Brown County Housing Allowance Office (HAO) began open enrollment, it has received more than 7,000 preliminary applications and has enrolled nearly 3,600 of the county's eligible households. Over 5,500 housing evaluations and reevaluations have been completed for enrollees and nearly 2,700 enrollees have received one or more housing allowance payments. The HAO's primary concerns during the past year have been to coordinate outreach and enrollment processing so as to avoid either slack or overload; and to bring monthly costs per client down to an acceptable longrun level.

On-site research began in 1973 with sample selection and, early in 1974, the baseline surveys of a sample of about 4,400 residential properties throughout the county. In November 1974, a permanent panel of 1,945 properties was selected from among those surveyed at baseline; and during the first half of 1975, a second wave of surveys was conducted on the empaneled properties. The Wave 2 surveys included field observations of more than 2,700 residential buildings and interviews or attempted interviews with 1,300 landlords, 3,000 tenants, and nearly 700 homeowners. At the end of September 1975, survey questionnaires and other field reports were being prepared for machine tabulation and analysis at Rand's offices in Santa Monica.

In the meantime, the baseline survey files and HAO administrative records for the first year of program operations were undergoing audit and analysis in Santa Monica. By the end of the period, codebooks and audit reports were either published or nearing completion for all surveys, and analysis of the data was well under way. The first analytical report was published in April 1975, and five others were either published or in draft by the end of September.

In the following pages, we review the events summarized above in greater detail. Section IV presents a sample of analytical findings drawn from working notes either already published or now in draft.

IMPLEMENTING THE HOUSING ALLOWANCE PROGRAM

Brown County was designated as Site I of the Supply Experiment in December 1972. During the following eighteen months, Rand, HUD, and local officials worked jointly to secure community consent, to establish the contractual relationships necessary to operate the allowance program there, to organize and staff the Brown County HAO, and to develop and test program standards and administrative procedures.[1]

[1] For details of those events, see the *First Annual Report*, Sec. II. Appendix B of the present report lists the major steps in chronological sequence.

Applications and Enrollment

Although test enrollments were conducted as early as March 1974, the HAO did not invite applications from the general public until 19 June 1974. During the first three months, about 1,100 preliminary applications were received. Households were enrolled in the program as rapidly as the HAO staff could schedule interviews, verify the information obtained from applicants, and determine their eligibility and the amounts of their allowance entitlements. As households were enrolled, the HAO evaluated their housing for conformance to program standards and authorized payments for those occupying certifiable units. At the end of September 1974, about 700 enrollment interviews had been completed, 454 households were enrolled, and payments had been authorized for 245 of the enrollees.

As enrollment procedures smoothed out and the initial backlog of applications was reduced, the HAO began a cautiously modulated outreach program designed to elicit applications at a rate that would enable them to be promptly processed. Staffing was premised on a two-year schedule of enrollment, up to the program ceiling of 6,096 households receiving assistance at any given time.

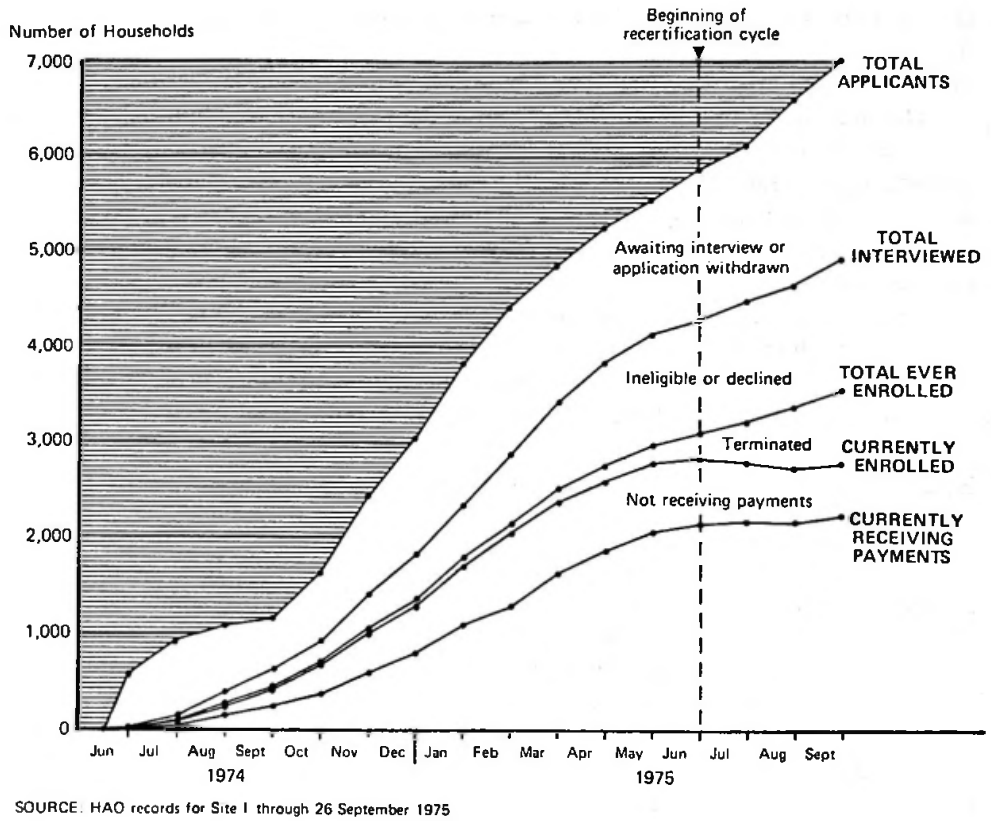
By the end of September 1975, over 7,000 households (about 14 percent of all those in Brown County) had applied for assistance, and over 4,900 enrollment interviews had been completed. The cumulative results are shown in Fig. 2.1. From October 1974 through February 1975, enrollment climbed steadily from about 215 to about 440 per month. Since February 1975, the pace of new applications and enrollments has noticeably slackened, despite staged increases in the intensity of outreach activities. At the end of September, 3,555 households had been enrolled in the program and 777 had been terminated, for a net current enrollment of 2,778 households.

One factor affecting enrollment during the early part of 1975 was the national economic recession, reflected in Brown County's manufacturing industries (e.g., paper mills and paper products) by curtailed hours and layoffs. A number of temporarily unemployed workers applied and were determined eligible for assistance that enabled them to meet their rent or mortgage payments. The local economy recovered quickly. By the end of June, voluntary withdrawals and semiannual reviews of eligibility had removed some 289 enrolled households from the program. By the end of September, 777 households had been dropped from program rolls, about 47 percent of them because they were no longer eligible and 53 percent because they no longer wished to participate.[2]

The allowance program does not have an enrollment target. One objective of the experiment with open enrollment is to measure the appeal of the program to those who are eligible to participate. As explained in Sec. V, it is difficult to obtain a reliable estimate of the numbers of eligible households in the county, even with the aid of our sample surveys of households there. Our baseline survey, conducted early in 1974, indicated that the county had about 8,100 eligible households,[3] excluding some 1,300 already assisted under other federal housing programs. On that basis,

[2] The leading reason for involuntary terminations was that income had risen above the eligibility limit (207 cases); in second place were 55 households that had moved outside Brown County. Over half the voluntary terminations were households that had failed to complete semiannual or annual recertification procedures (213 cases, most of whom had never received a payment).

[3] Earlier estimates based on less adequate data indicated that as many as 12,000 households in the county might be eligible.



SOURCE: HAO records for Site I through 26 September 1975

Fig. 2.1—Applications, enrollment, and participation status: Brown County housing allowance program, June 1974 to September 1975

44 percent were enrolled at some time during the program's first fifteen months and 34 percent were still enrolled at the end of September 1975.

About 43 percent of the households that apply for assistance are either ineligible or change their minds about participating. Many screen themselves out on the basis of additional information provided to them by telephone after they submit an application but prior to an interview; others drop out during their interviews. About a fifth of those that complete their interviews turn out to be ineligible, usually because their incomes exceed program limits (76 percent), but sometimes because their assests are too high (14 percent) or for other reasons.

Outreach

Manifestly, the program's appeal to eligible households in Brown County can be tested only if they are aware of the program and understand it. During the program's first year, there was considerable news coverage of its purposes and activities by the local press and in radio and television broadcasts. Newspaper and radio advertising were also used to inform the public about eligibility standards and allowance benefits. The HAO established contact with some 130 civic, fraternal, and religious organizations, addressing their meetings and distributing brochures to

their members. Yet, early analysis of survey data gathered in the first half of 1975 indicated that only about a third of all household heads in Brown County had a clear idea of how the program worked and many were unaware of its existence.[4]

The declining trend in applications from February through July led the HAO to step up outreach activities late in the summer of 1975. In August, the HAO began advertising on television as well as on the radio and in local newspapers. The effects were immediate but not durable. Five hundred applications were received in August, double the number received in July; in September, however, only 376 applications were submitted.

The HAO continues to experiment with new ways of reaching the estimated 4,500 eligible households who have yet to participate. Only when a high level of program awareness is reached can enrollment figures be interpreted as reflecting the program's appeal to low-income households.

Housing Evaluation and Payment Authorization

Once enrolled, a household can receive payments only while occupying a housing unit that has been evaluated and approved by the HAO. Renters must also submit a copy of their lease agreement with the landlord. Throughout the period covered here, homeowners were required to enter into a nominal lease-leaseback agreement with the HAO, so that they could be assisted as renters under the terms of Sec. 23, the funding authority for the program.

Failed housing evaluations, lease problems, and resistance to the lease-leaseback arrangement have all prevented some eligible households from receiving assistance. Homeowners who have objected to the lease-leaseback agreement because it appeared (incorrectly) to them to endanger the title to their home usually dropped out prior to completing enrollment; the other issues usually arose after enrollment.

Of the 3,555 households that were enrolled before the end of September 1975, only 2,681 had received one or more allowance payments. Payments to the other 874 households had not been authorized, in nearly all cases because the housing units they occupied at the time of enrollment were inadequate by program standards and the enrollees had so far been unable or unwilling to have these units repaired or to locate other, certifiable units.[5] In a few cases, landlords refused to permit evaluations or declined to enter into a lease agreement with their tenants or prospective tenants.[6]

At the end of September 1975, the HAO had completed initial evaluations of 3,910 housing units, most of them occupied by clients at the time they enrolled. About half of these units failed their initial evaulations. Of those that failed, a fourth had adequate space but lacked some of the required facilities (such as a tub or shower with hot and cold running water). About half had adequate space and facilities but

[4] To assist in planning outreach, applicants are asked how or from whom they heard about the program. Fully half have listed radio, television, or newspapers as their source of information; 28 percent learned of the program from friends or relatives; and 11 percent were referred to the program by social service agencies. Other sources of information include landlords, realtors, and church pastors.

[5] Of the 874 enrolled households that have never received payments, 398 had terminated their enrollment by the end of September 1975.

[6] Under Sec. 23 regulations, a nominal one-year lease with several specific provisions is required before a renter can be assisted. Rental leases are uncommon in Brown County and reports from the site indicate that a number of landlords felt threatened by the lease—especially by the provision that requires HAO approval of evictions.

failed because of hazardous or unsanitary conditions on the premises (such as a broken handrail or a poorly vented heater). Only 9 percent failed solely because of overcrowding.

Nearly 1,200 housing units that failed their initial evaluation were subsequently repaired by their owners or occupants and reevaluated by the HAO at the client's request. Almost without exception, these units passed their second evaluation.

Most of the defects noted have been minor ones, easy and inexpensive to correct. As reported in Sec. IV, over a third of the reported defects have related to the absence or the condition of handrails and stairs. Defective windows and defective or missing screens have also been common. Inadequate venting of furnaces and hot water heaters is perhaps the most serious of the frequently noted defects, accounting for about 10 percent of the total.[7]

Of the 2,681 households who have received allowance payments, about 2,400 were still in their preenrollment housing units at the end of September 1975. In other words, most were satisfied with their preenrollment housing and were able to arrange for its repair if necessary to meet program standards. Of those who moved, some did so because the preenrollment unit could not be brought up to standard, but others sought better housing even though their preenrollment units passed initial evaluations.

Altogether, these 2,681 households received $1.3 million in allowance payments during the program's first fifteen months. The total is not evenly distributed over time, the monthly amount increasing with the number of participants. In September 1975, allowance payments totaled $137,000, a figure which annualizes to $1.6 million. In that month, the average payment to homeowners was about $54 and the average payment to renters was about $61, the difference reflecting the generally lower incomes of renter participants.

Program Administration

During the year ending 30 September 1975, there were no fundamental changes in the HAO staff or administrative procedures. However, the procedures have been refined and adapted to a variety of unforeseen minor problems, staff productivity has risen as tasks have become more familiar, and workloads have shifted within the office. The machine records system has become fully operational, so that some formerly manual procedures are now automated.

The HAO is located in a leased one-story building near the central business district of Green Bay. Its office layout was specifically designed to create a relaxed and comfortable atmosphere for dealings between staff and clients and to reinforce the clients' sense of privacy. For instance, enrollment interviews are conducted in small rooms designed for that purpose, where the applicant is not visible to others and his conversation with the interviewer cannot be overheard. The interviewer is seated at a table with the applicant rather than behind a desk, and the interview is not interrupted by telephone calls or office business.

The HAO has a staff of 60 persons, about the same number as a year ago. It is organized into two divisions, each reporting to the director's office.[8] The client

[7] See Table 4.27. The data there cover only the first twelve months of housing evaluations, through 20 June 1975; however, the distribution of failure ratings by reason for failure has not changed much since then.

[8] See Appendix C for an organization chart.

services division is divided into four sections, each responsible for a major function: enrollment interviews and telephone screening, certification of eligibility, housing evaluation, and housing information and equal opportunity services. The finance and administration division disburses monthly allowance payments, operates the machine records system, and handles accounting, personnel, and administrative matters. Public information and outreach activities are handled by a section within the office of the director.

Policies and procedures of the housing allowance programs in both sites are governed by the *Housing Allowance Office Handbook* approved by HUD and periodically updated; by manuals and policy clarification memoranda prepared by Rand's Field and Program Operations Group (FPOG), which generally oversees and advises the HAOs in both sites; by the HAO's board of trustees, which includes Rand's site manager, five other Rand members, and two local citizens; and by administrative instructions prepared by HAO staff and approved by FPOG.

In addition to the outreach, enrollment, and housing evaluation activities discussed earlier, three administrative functions should be mentioned here: eligibility certification, record maintenance, and quality control.

Eligibility Certification. The certification section of the HAO reviews each application for enrollment for completeness and accuracy, determines whether the applicant is eligible for assistance and if so, calculates the amount of his allowance entitlement. The information submitted by the applicant is verified on a sample basis, the sampling rate varying with the amount of documentation submitted with the application. The critical items are income, assets, and disability status. Verification usually entails contacting either the employer or the agency that administers transfer payments to the client (e.g., the county welfare department), and may require further consultation with the client.

About 2,040 verifications of enrollment applications have so far been completed. Forty-five percent of these revealed at least minor discrepancies between the verified information and the information obtained originally from the client, but eligibility or allowance entitlement was affected in only 135 cases. Seventeen applicants were found to be ineligible, 72 had their allowance entitlement decreased, and 46 had their entitlement increased.

The certification section also conducts a semiannual recertification check by mail, and each client returns annually to the HAO for a full review of his eligibility and allowance entitlement. As a result of these reviews, 379 of the 2,681 clients for whom payments were ever authorized have been dropped from the rolls because they are no longer eligible; and 59 have had their payments suspended, either because they do not currently live in approved housing units or because they have failed to comply with recertification requirements.

Record Maintenance. The information obtained from applicants at the time of enrollment and from housing evaluations conducted by the HAO is entered into a machine records system that edits, checks, and cross-references the data as needed for administrative purposes. Once a client has been authorized for payment, the automated system produces allowance checks and address labels for mailing, and records all transactions relating to each client for future reference. Each month, the records are scanned for clients who are due for recertification of eligibility or housing reevaluations, and the appropriate rosters and preprinted forms are produced

by machine. Finally, management information reports on all aspects of program administration are produced at regular intervals.

The HAO staff prepares machine-readable inputs to the record system. Processing is done by a local bank's computer under a lease agreement. Throughout the system, care is taken to preserve the confidentiality of clients' affairs from unauthorized scrutiny. Information about clients, including whether a named person is enrolled in the program, is never released to others unless the release is authorized in writing by the client, or as required by law.

Quality Control and Financial Audit. Most routine operations of the HAO are regularly checked for conformance to program policies and procedures and for efficiency and accuracy. For example, a sample of housing units is reevaluated by a different member of the staff to check the reliability of initial evaluations. Enrollment interviews are regularly monitored by enrollment supervisors to ensure that correct procedures are followed and that clients are courteously treated.

At the end of 1974, a financial audit of the HAO was conducted by a firm of certified public accountants. Their work included checking the accuracy and proper delivery of payments, auditing client housing expenses, and validating selected eligibility and housing evaluation items for a sample of clients. The audit report revealed few accounting errors and no evidence of improper practices.

Administrative Costs

During the first fifteen months of the allowance program's operations in Brown County, benefits amounting to $1.3 million have been paid out to participating households. Over the twenty-four months of its legal existence, the HAO's administrative expenses have amounted to $2.0 million. The obviously unfavorable ratio of these administrative costs to benefits, however, is quite misleading as a guide to the expense of operating a permanent national program, for four reasons.

First, many of the expenses incurred by the Brown County HAO prior to the opening of enrollment in mid-1974 were for activities entailed in inventing a new institution and designing its procedures; most of them were not repeated in Site II of the experiment.

Second, there is a large overhead component to administrative expenses, especially at the beginning of the program when one is planning for an uncertain but rising level of enrollment. For instance, the HAO's staff increased only slightly between October 1974 and September 1975, even though enrollment increased from 454 to 3,555 households.

Third, the first two years of program operations, when much of the workload is new enrollments, can be expected to be more expensive per client than later, when most of the workload relates to routine transactions with those already enrolled.

Finally, some of the HAO's recurrent activities were imposed because of the experimental nature of the program and would not necessarily be part of a nonexperimental program. For instance, preenrollment housing units are systematically evaluated even though the enrollee has indicated that he plans immediately to move to a more desirable unit; the information about preenrollment units is needed to test for changes in preenrollment and postenrollment housing conditions.

Especially for the first three reasons, monthly administrative expenses per enrolled household and per dollar of benefits paid drop as enrollment and allowance

payments increase. By September 1975, when about 2,800 households were enrolled, administrative expenses amounted to $88,600—$32 per month per household or 65 cents per dollar of current monthly benefits paid. This amount still includes a significant component of experimental costs that would not be incurred in a national program.

Rand's program analysts and the HAO's staff expect expenses per client month to drop when enrollment reaches its eventual plateau, both because of economies of scale in serving a larger number of clients and because routine transactions with existing clients are less expensive than initial enrollment.

Relations with Applicants and Clients

The Brown County Housing Allowance Office shares with all public assistance agencies the problems inherent in applying general rules to individual circumstances, a procedure bound to result occasionally in real or perceived inequities. In our case, the potential for controversy with applicants and clients was considerably heightened by the fact that the HAO was a newly designed institution whose standards and procedures were evolving and whose staff daily faced unprecedented situations. In view of these facts, the general smoothness and amiability of the HAO's relations with applicants and clients is remarkable.

To be sure, some applicants and enrollees have felt that they were unfairly treated or that program standards were unreasonable. From the beginning of its operations in Brown County, the HAO has had procedures for the adjudication of grievances, including a grievance panel with staff, client, and community members. Although staff decisions have occasionally been appealed to the HAO's director, no cases have ever been brought to the panel.

Program standards and formalities have been the main sources of misunderstanding and complaint. One such issue is the HAO's requirement that an enrollee's housing unit be brought up to program standards before payments begin, a contingency that seems unreasonable to some homeowners who claim difficulty in paying for repairs without the aid of the allownace. Another such issue has been the requirement for renters to enter into a lease agreement with their landlords; when a landlord has been unwilling to bind himself to the required lease terms, clients have occasionally faced the choice of moving or dropping out of the program. Housing evaluations have sometimes been objected to as invasions of privacy, although some clients (and even some landlords) have thanked the HAO for reporting housing defects that needed attention. The reasonableness of some of the program's specific housing standards (e.g., ceiling height requirements) have been questioned by those adversely affected.

By far the most prominent issue has been the lease-leaseback arrangement for homeowners. Some applicants have declined to participate upon learning that they were required to lease their homes to the HAO, even though it was explained that they could unilaterally terminate the lease and their participation in the program at any time. Anecdotal evidence indicates that other homeowners who were probably eligible for assistance have failed to apply because they were suspicious of this provision, confusing it with the lien sometimes placed on a homeowner's property as a condition for receiving public assistance payments. Certainly the fact that the

participation rate for homeowners is well below that for renters (see Sec. IV, Table 4.19) supports the impression that this misunderstanding is widespread.[9]

Although accounting for applicants' incomes and assets has posed complex problems for the HAO's staff, there have been surprisingly few complaints from those found ineligible during the enrollment interview because of excess income or asset holdings—about 850 applicants to date. Perhaps one reason is that as income approaches the upper limit of eligibility, allowance entitlement approaches zero, so that those who exceed income limits by a few hundred dollars understand that they would gain little if a recalculation or a minor change in rules brought their incomes slightly below the limit.

Our overall impression of client satisfaction is perhaps incorrectly reinforced by the tendency of the people of Brown County to keep their grievances private rather than seek a public forum for them. Perhaps a related manifestation of their penchant for privacy is their evident disinterest in the housing information sessions scheduled by the HAO for small groups of applicants. Attendance is voluntary, and applicants have stayed away in droves despite every device that the HAO has tried to capture their interest and make it easy for them to attend.

Relations with the Community

From the beginning of the negotiations that led to Brown County's selection as an experimental site, relations with local officials and civic leaders have been extremely cordial. At no time during the program's history has its implementation been impeded by public controversy or factional dissent.

It is significant in this connection that every civil division in Brown County—the county itself, two cities, four villages, eighteen townships, and an Indian tribal council—made an explicit official decision to participate in the program, signing a memorandum of understanding with HUD and authorizing the county housing authority to operate in its jurisdiction. With the exception of one rural township, these agreements were secured before enrollment began.

The Brown County Housing Authority was formed specifically to satisfy Sec. 23 requirements for a local public agency to enter into an annual contributions contract with HUD. The funds received by the authority under this contract are then passed to the HAO to support program administration and disbursement of payments. Each month, the five-member housing authority meets and is briefed by the HAO staff on the status of the program and its current problems. The authority's members have taken their responsibilities seriously and often inquire deeply into policy issues that affect the community; but they have made no attempt to divert the program from its experimental purposes.

The HAO also reports quarterly to a countywide advisory committee of fourteen public officials and civic leaders, who provide useful insights into public response to the program and serve as a sounding board for contemplated program changes.

In addition to these regularly scheduled meetings, the HAO staff frequently briefs public bodies such as the county board of supervisors and members of public

[9] Acting under new provisions of the Housing and Community Development Act of 1974, HUD recently authorized the HAO to abolish the lease-leaseback requirement for homeowners. In Brown County, this was done early in October 1975, so the consequences of this change are not reflected in program data for the period covered here.

service organizations, local professional associations, and fraternal or religious groups whose activities put them in direct contact with prospective program participants. The HAO has regular contact with about 130 such organizations throughout the county.

As indicated above, community leaders have consistently supported the program or at least been neutral. Through several local elections, no incumbent or candidate has attacked the program, and there has been no organized opposition from civic groups. The concerns voiced by community leaders have mostly related to specific program features that have also been the subject of client complaints: the lack of front-end financing for housing improvements, the lease requirement for renters and the lease-leaseback arrangement with homeowners, and specific housing standards. More general concerns have been whether HAO housing standards were sufficiently rigorous, and how open the program should be to inmigrants from outside the county. Another issue is whether the HAO's schedule of standard costs for adequate housing, based on 1973 data for Brown County, may not have become obsolete because of general price inflation.

It is important to note that community leaders, while recognizing inflation in housing costs as a troublesome fact, have not been inclined to blame the allowance program for it. In general, they view the program as a promising but as yet unproven way to maintain the quality of the county's housing stock, perhaps revitalizing the central city's few deteriorating neighborhoods, and helping low-income families to maintain a decent standard of living.

Below the leadership level, Brown County residents have generally taken the program in stride, without strong positive or negative feelings. Objections from nonparticipants have usually reflected either a distaste for federal intervention in local problems or the perception that they were being taxed to support the undeserving poor. Only three letters to local newspapers have described alleged or hypothetical rip-offs by program participants, but it is not unusual for some members of audiences addressed by HAO staff to express their doubts about the program's effectiveness or their ideological objections to it.

The strongest focus of grassroots criticism has been the HAO's outreach program, specifically its increasing use of paid advertising. To many Brown County residents, it seems foolish to spend public money to persuade potential clients to accept public benefits. For the housing allowance experiment, it is extremely important that program participation rates reflect widespread understanding of eligibility standards and program benefits; but the HAO has so far been unable to find an effective mode of outreach that does not exacerbate the reaction described above.

Near-term Prospects

The first priority of program implementation during the coming year is outreach. Despite an aggressive and carefully planned effort utilizing the news and advertising media, direct mailings, public meetings, and contacts with a multitude of civic, fraternal, and religious organizations, it appears that many eligible households in the county are not yet well enough informed to make a sensible decision to apply or not to apply.

Preliminary tabulations of nearly 2,800 household interviews conducted between January and April of 1975 indicate that 76 percent of the respondents thought they had heard about the allowance program, but further probing convinced the

interviewers that no more than half the respondents were able to distinguish the allowance program from other housing or welfare programs in the community and that less than a third were unequivocally clear as to the nature and functions of the allowance program.[10]

Although it is possible that new outreach techniques, the slow natural percolation of program awareness through the community, or unfavorable trends in the local economy will boost new enrollments above recent levels (140 to 170 per month), we judge that sometime during the next twelve months, enrollment will level out at well below the program ceiling of 6,096 households assisted at any given time. Whatever the final figure, once program size is stabilized, the HAO can begin to adjust its staffing pattern and procedures from the current emphasis on new enrollments to routine transactions with those already enrolled.

In the meantime, administrative procedures have stabilized enough so that increased attention can be given to achieving second-order improvements in client services and internal procedures, particularly those relating to the maintenance of accurate machine records and the automatic preparation of management information reports.

IMPLEMENTING THE RESEARCH PROGRAM

During the year ending 30 September 1975, Rand selected a permanent panel of residential properties from among those with complete baseline records, and a new fieldwork subcontractor conducted the second wave of surveys addressed to these properties, their owners, and their occupants. Meanwhile, records from the baseline surveys that had been completed in April 1974 were edited, keypunched, cleaned, and compiled into machine-readable research files. These files in turn were audited to check sample validity and data reliability. At the close of the period covered by this report, preliminary master files for all but the baseline survey of neighborhoods had been audited and most of the baseline analysis was complete. However, only a few reports on either the audit or the analysis of these files had actually been published.

The following pages provide additional details about these activities. A chronology of key events is presented in Appendix B.

Selecting the Permanent Panel of Residential Properties

The baseline surveys that were completed in April 1974 were addressed to a sample of 4,415 residential properties in Brown County and the fieldwork yielded 2,411 complete property records eligible for admission to the permanent panel.[11] In December 1974, 1,945 of these properties were selected for the panel, slightly fewer than the design target of 2,074. The difference is accounted for by shortages of acceptable candidates in specific sample strata, as shown in Table 2.1. In some

[10] These are unweighted percentages, reported here prior to careful analysis of individual response patterns. The sample is composed mostly of households whose incomes fall in the low-to-moderate range, but only about a fourth of them are eligible for assistance.

[11] A complete property record consists of field reports for each residential building on the property, an interview with the owner, and (for rental properties) either an interview with at least one tenant or a vacancy report. Landlord interviews are required to have usable data in all fields that are used to construct financial accounts for the property, a condition described as "supply-response completeness."

Table 2.1

Characteristics of the Permanent Panel of Residential Properties for Site I: Brown County, Wisconsin

Sampling Stratum		Number of Properties			Characteristics of Empaneled Properties			
			Actual		Number of Residential Buildings		Number of Housing Units	
Stratum Number	Description	Design Target	Number	Percent of County Total	On Property	In Panel	On Property	In Panel
	Urban Rental	1,252	1,119	18.4	1,247	1,206	3,642	2,257
	Single-family	630	452	24.6	452	452	452	452
1	Low rent	241	117	30.1	117	117	117	117
4	Medium rent	296	242	36.1	242	242	242	242
7	High rent	93	93	11.9	93	93	93	93
	2-4 units	500	503	12.6	525	525	1,135	1,134
2	Low rent	186	186	13.5	199	199	444	444
5	Medium rent	238	241	18.4	250	250	536	535
8	High rent	76	76	5.9	76	76	155	155
	5+ units	122	164	60.7	270	229	2,055	671
3	Low rent	47	32	55.2	40	37	290	128
6	Medium rent	36	100	75.2	180	145	1,130	408
9	High rent	39	32	40.5	50	47	635	135
	Rural Rental	199	175	27.0	199	196	311	304
10	Low or medium rent	142	139	24.9	154	151	243	236
11	High rent	57	36	40.0	45	45	68	68
	Urban Owner	429	463	1.8	463	463	464	464
12	Low value	159	159	2.9	159	159	160	160
13	Medium value	201	201	2.9	201	201	201	201
14	High value	69	103	.8	103	103	103	103
	Rural Owner	150	150	2.5	150	150	150	150
15	Low or medium value	100	100	3.1	100	100	100	100
16	High value	50	50	1.8	50	50	50	50
	Other Residential	44	38	23.2	764	59	896	113
17	Rooming house	15	18	48.6	18	18	150	72
18	Mobile home	29	20	15.7	746	41	746	41
	Total	2,074	1,945	5.1	2,823	2,074	5,463	3,288

SOURCE: Tabulations by HASE staff of sample selection records for Site I.

NOTE: See Ira S. Lowry, *Monitoring the Experiment: An Update of Sec. IV of the General Design Report*, The Rand Corporation, WN-9051-HUD, April 1975, for a current account of survey sample design.

Originally, rental properties were stratified by terciles of the countywide distribution of gross rents. When the permanent panel was selected, the rent stratification was altered slightly to obtain better groupings of panel eligible properties. "Low rent" is under $120; "medium rent" is $120-164; "high rent" is $165 and over.

Ownership properties are stratified by quartiles of the countywide distribution of assessed values for such properties. "Low value" is under $13,090; "medium value" is $13,090 to $17,863; the latter figure being the countywide median. "High value" is the upper two quartiles, i.e., all above $17,863.

strata, we found that candidate properties were less abundant in the population than we had believed when the design targets were set; in other strata, nonresponse at earlier stages of sample selection reduced the numbers of complete property records below the design target. In the light of these and other circumstances, we empaneled more properties in some strata than were called for by the original sample design without exceeding the overall design target of 2,074 properties.

Some of the empaneled properties have more than one residential building on them, and many have more than one housing unit. On the larger properties, we sampled buildings and units for annual surveys, so that we will seek annual data for 97 percent of all residential buildings on sampled properties but only 60 percent of all housing units. Altogether, the permanent panel of properties with complete baseline records consists of 1,945 properties, 2,074 residential buildings, and 3,288 housing units. The owners of these properties, the empaneled residential buildings, and the occupants of empaneled housing units all were subsequently scheduled for Wave 2 surveys.[12]

Besides the permanent panel of residential properties, we also selected a panel of urban renter households according to specifications of the Urban Institute, which needs for its integrated analysis a sample of households in the Supply Experiment to compare with the households participating in the Demand Experiment. Members of the "comparability" panel are to be reinterviewed annually so long as they continue to reside in rental units in Brown County, even though they may move from their baseline addresses. (In contrast, housing units in the permanent panel described above are revisited annually and interviews are attempted with the current occupants.) A total of 755 households were selected from among those with complete baseline interviews, of which 368 were occupants of housing units in the permanent panel of residential properties and 387 were not. In addition to interviews of these households, a residential building report is to be completed for each building they occupy; but their landlords need not be interviewed.

Preparing for the Second Wave of Surveys

Baseline fieldwork in Site I was conducted for Rand by Urban Opinion Surveys, a division of Mathematica, Inc. For Wave 2, a different organization, the National Opinion Research Center of the University of Chicago (NORC), was chosen. During the summer of 1974, NORC established a site office in Green Bay and staffed supervisory positions for the presurvey field operations that were to begin in September. At the same time, Rand's Survey Group began to work with NORC staff to revise the pretest survey instruments and training manuals for Wave 2. The survey fieldwork itself was scheduled for the period January-November 1975, a much longer field period than at baseline, but one which would reduce peak load problems for both the Survey Group and the fieldwork subcontractor.

Preparation for Wave 2 followed two tracks. One entailed sample selection and updating of the records used to generate field assignments and track their progress. The other involved developing survey instruments and training the field and site office staff.

[12] In addition, an annual sample of properties with newly constructed residential units on them will be added to the panel to keep it representative of the entire housing stock of the county. The target is an annual increment of 40 properties for which complete survey records are obtained in the year they enter the panel. Selection of the Wave 2 new construction sample is discussed further below.

Selection of the permanent panel and the comparability panel was described above. While that operation was in progress, NORC fieldworkers visited certain of the eligible properties to record any changes in the number or addresses of residential units on them that would affect fieldwork assignments. They also conducted a tax record search on rental properties to update baseline information about the owners of properties that had since changed hands. The Wave 2 survey samples and all record updates were loaded into Rand's survey record management system (HAMISH) by mid-December. HAMISH then generated the address labels, respondent information sheets, directories, and other field materials needed to identify the properties, buildings, housing units, and persons to be surveyed. These were transmitted to NORC's site office early in January for assignment to fieldworkers.

Instrument development began in July, when Rand's Design and Analysis Group (DAG) provided the Survey Group with specifications for the information to be obtained in Wave 2. The Survey Group worked with NORC staff to modify the baseline instruments for each survey according to these specifications and to pretest new question wordings and skip patterns. By the end of November, work on the instruments for the interview surveys was completed, and NORC began updating the training manuals for interviewers and field editors. The instrument and manuals for the survey of tenants and homeowners were ready early in January. NORC hired and trained interviewers at the site and was ready to enter the field in mid-January.

The Results of Survey Fieldwork

Combining the permanent panel of residential properties and the comparability panel of renter households, the survey schedule called for 90-minute (average time) interviews with 2,973 tenants, 685 homeowners, and 1,316 landlords; and for field observation reports on 2,714 residential buildings. As noted, the schedule was stretched out, with tenants and homeowners surveyed in January, landlords in April, and residential buildings in August.

A new element of the survey schedule for Wave 2 was the new construction sample, used to update the permanent panel so that it would continue to be representative of the county's housing stock. Building permits issued during 1973 were sampled to obtain 65 newly constructed residential properties that were subjected to the full agenda of surveys beginning late in August.

Tables 2.2, 2.3, and 2.4 summarize the results of Wave 2 fieldwork (excluding the new construction sample) through 30 September for landlords, tenants, and homeowners. At that time, a few interview assignments of each type were still in the field because some respondent or administrative difficulty had prevented them from earlier completion. Residential building reports are not tabulated because they only rarely present field completion problems.[13]

Overall, the field experience was good. Careful preparation of field materials and the long field period held the number of cases in which the designated respondent could not be contacted to less than 1.2 percent of all interview attempts for each major class of respondent (landlords, tenants, and homeowners); the corresponding baseline figures were 9 to 13 percent. Similarly, refusals accounted for 10 to 12

[13] The survey of residential buildings nonetheless turned out to be the most troublesome and about half of all completed field reports were eventually refielded. See comments below.

Table 2.2

Final Status of Landlord Survey Records: Site I, Wave 2

Panel Stratum		Interview Attempts by Final Status				Not Attempted Due to Tenure Change[a]	Still in Field[b]	Total Sample	Summary Statistics		
Stratum Number	Property Description	Field Complete	Refusal	No Contact	Total				Sample Completion Rate[c]	Field Completion Rate[d]	Field Response Rate[e]
	Urban Rental	909	112	12	1,033	38	48	1,119	.81	.88	.89
	Single-family	354	35	5	394	37	21	452	.78	.90	.91
1	Low rent	99	10	2	111	5	1	117	.85	.89	.91
4	Medium rent	187	21	3	211	20	11	242	.77	.87	.90
7	High rent	68	4	0	72	12	9	93	.73	.94	.94
	2-4 units	433	55	6	494	1	8	503	.86	.88	.89
2	Low rent	163	16	3	182	1	3	186	.88	.90	.91
5	Medium rent	206	28	3	237	0	4	241	.85	.87	.88
8	High rent	64	11	0	75	0	1	76	.84	.85	.85
	5+ units	122	22	1	145	0	19	164	.74	.84	.85
3	Low rent	26	5	0	31	0	1	32	.81	.84	.84
6	Medium rent	76	11	1	88	0	12	100	.76	.86	.87
9	High rent	20	6	0	26	0	6	32	.63	.77	.77
	Rural Rental	134	25	2	161	3	11	175	.77	.83	.84
10	Low or medium rent	106	19	2	127	3	9	139	.76	.83	.85
11	High rent	28	6	0	34	0	2	36	.78	.82	.82
	Other Rental	17	3	0	20	0	2	22	.77	.85	.85
17	Rooming house	11	3	0	14	0	0	14	.79	.79	.79
18	Mobile homes	6	0	0	6	0	2	8	.75	1.00	1.00
	Total	1,060	140	14	1,214	41	61	1,316	.81	.87	.88

SOURCE: Tabulations by HASE staff of the survey record management system (HAMISH) master file for Site I, Wave 2, as of 30 September 1975.

NOTE: This table includes only interview assignments for properties included in the permanent panel chosen in December 1974. It does not include assignments related to the Wave 2 new construction sample of 65 properties that was selected in August 1975. At the time of tabulation, 61 cases were still in the field and final status codes for the remainder had not been audited. For all these reasons, the final accounting for the survey of landlords will differ in detail from the entries shown here.

[a] Properties that were in rental use during baseline but which were found to be owner-occupied during Wave 2 and were refielded for homeowner interviews (see Table 2.4).

[b] Not yet assigned because of administrative problem, assigned but no interview, or unresolved problem with completed interview.

[c] Field completions/total sample.

[d] Field completions/total interview attempts.

[e] Field completions/total contacts.

percent of each group, compared with baseline figures of 18 percent for homeowners, 19 percent for landlords, and 10 percent for tenants. For each class of respondents, 87 to 89 percent of all interview attempts resulted in completed interviews.

Although field experience varied by stratum, the variation was not great. The field completion rate (completed interviews divided by number attempted) for individual strata ranges from 75 to 100 percent, with two-thirds of the strata listed in the three tables falling between 85 and 95 percent.

These figures may change slightly when final accounting for the survey sample is completed, and we have yet to combine the various field reports for each property to determine how many complete property records were obtained. However, the completion rates shown in Tables 2.2. to 2.4 were encouraging in that those for each

Table 2.3

Final Status of Tenant Survey Records: Site I, Wave 2

Panel Stratum		Interview Attempts by Final Status				Not Attempted, by Reason			Still in Field[b]	Total Sample	Summary Statistics		
Stratum Number	Property Description	Field Complete	Refusal	No Contact	Total	Vacant	Other[a]	Total			Sample Completion Rate[c]	Field Completion Rate[d]	Field Response Rate[e]
	Urban Rental	1,648	204	11	1,863	118	191	309	64	2,236	.74	.88	.89
	Single-family	328	34	3	365	32	5	37	15	417	.79	.90	.91
1	Low rent	85	10	3	98	8	1	9	7	114	.75	.87	.89
4	Medium rent	182	15	0	197	18	2	20	4	221	.82	.92	.92
7	High rent	61	9	0	70	6	2	8	4	82	.74	.87	.87
	2-4 units	745	114	5	864	51	181	232	34	1,130	.66	.86	.87
2	Low rent	275	42	3	320	20	82	102	18	440	.63	.86	.87
5	Medium rent	366	49	1	416	23	84	107	12	535	.68	.88	.88
8	High rent	104	23	1	128	8	15	23	4	155	.67	.81	.82
	5+ units	575	56	3	634	35	5	40	15	689	.83	.91	.91
3	Low rent	99	6	2	107	18	2	20	2	129	.77	.93	.94
6	Medium rent	365	34	1	400	9	3	12	11	423	.86	.91	.91
9	High rent	111	16	0	127	8	0	8	2	137	.81	.87	.87
	Rural Rental	189	16	1	206	23	39	62	32	300	.63	.92	.92
10	Low or medium rent	144	12	1	157	21	32	53	22	232	.62	.92	.92
11	High rent	45	4	0	49	2	7	9	10	68	.66	.92	.92
	Other Rental	41	6	1	48	16	0	16	21	85	.48	.85	.87
17	Rooming house	19	4	0	23	13	0	13	20	56	.34	.83	.83
18	Mobile home	22	2	1	25	3	0	3	1	29	.76	.88	.92
00	Comparability panel[f]	324	18	3	345	0	1	1	6	352	.92	.94	.95
	Total	2,202	244	16	2,462	157	231	388	123	2,973	.74	.89	.90

SOURCE: Tabulations by HASE staff of the survey record management system (HAMISH) master file for Site I, Wave 2, as of 30 September 1975.

NOTE: This table includes interview assignments for properties in the permanent panel chosen in December 1974 and for the comparability panel of urban renter households surveyed on behalf of the Urban Institute. It does not include assignments related to the Wave 2 new construction sample of 65 properties that was selected in August 1975. At the time of tabulation, 123 cases were still in the field and final status codes for the remainder had not been audited. For all these reasons, the final accounting for the survey of tenants will differ in detail from the entries shown here.

[a] Includes 198 housing units that were tenant-occupied during baseline but were occupied by a resident landlord or his agent during Wave 2. The tenant instrument is not administered to landlords or their agents. Also includes about 30 single-family houses that shifted from rental to owner-occupancy and were refielded as homeowners (see Table 2.4); and a few units that had been demolished or otherwise removed from the rental market.

[b] Not yet assigned because of administrative problem, assigned but no interview, or unresolved problem with completed interview.

[c] Field completions/total sample.

[d] Field completions/total interview attempts.

[e] Field completions/total contacts.

[f] Renter households chosen for the comparability panel whose housing unit was not included in the permanent panel. The total size of the comparability panel is 755 urban renter households.

major class of respondents are only slightly below the reinterview completion rates in the calculations that originally set the size of the permanent panel. In other words, our target of 900 five-year complete property records still seems feasible.

At this juncture, it appears that the least successful operation was the survey of residential buildings. Although virtually all field assignments were completed, validation checks indicated frequent discrepancies between the original and the validation report. The problem appears to reflect both instrument difficulties and poorly organized interviewer training. Rand and NORC reviewed the problem in September and agreed to reassign some 1,300 cases for new fieldwork.

Preparing for the Third Wave of Surveys

The planning cycle for Wave 3 surveys began in June 1975, while Wave 2 was still in the field. Over the summer, the Design and Analysis Group and the Survey Group reviewed the survey instrument for tenants and homeowners and agreed on

Table 2.4

Final Status of Homeowner Survey Records: Site I, Wave 2

Panel Stratum		Interview Attempts by Final Status				Not Attempted, by Reason			Still in Field[b]	Total Sample	Summary Statistics		
Stratum Number	Property Description	Field Complete	Refusal	No Contact	Total	Vacant	Other[a]	Total			Sample Completion Rate[c]	Field Completion Rate[d]	Field Response Rate[e]
	Urban Owner	374	57	2	433	3	7	10	26	469	.80	.86	.87
12	Low value	123	23	1	147	1	5	6	9	162	.76	.84	.84
13	Medium value	167	23	0	190	0	2	2	12	204	.82	.88	.88
14	High value	84	11	1	96	2	0	2	5	103	.82	.88	.88
	Rural Owner	130	15	0	145	2	0	2	3	150	.87	.90	.90
15	Low or medium value	86	11	0	97	1	0	1	2	100	.86	.89	.89
16	High value	44	4	0	48	1	0	1	1	50	.88	.92	.92
	Other Owner												
18	Mobile home	9	3	0	12	0	0	0	0	12	.75	.75	.75
	Tenure Change												
1-11	Permanent panel	33	0	0	33	1	0	1	7	42	.79	1.00	1.00
00	Comparability panel[f]	12	0	0	12	0	0	0	0	12	1.00	1.00	1.00
	Total	558	75	2	635	6	7	13	36	685	.81	.88	.88

SOURCE: Tabulations by HASE staff of the survey record management system (HAMISH) master file for Site I, Wave 2, as of 30 September 1975.

NOTE: This table includes interview assignments for properties in the permanent panel chosen in December 1974 and for the comparability panel of urban renter households surveyed on behalf of the Urban Institute. It does not include assignments related to the Wave 2 new construction sample of 65 properties (mostly ownership) that was selected in August 1975. At the time of tabulation, 36 cases were still in the field and final status codes for the remainder had not been audited. For all these reasons, the final accounting for the survey of homeowners will differ from the entries shown here.

[a] Unit demolished or otherwise removed from the housing inventory.

[b] Not yet assigned because of administrative problem, assigned but no interview, or unresolved problem with completed interview.

[c] Field completions/total sample.

[d] Field completions/total interview attempts.

[e] Field completions/total contacts.

[f] Renter households chosen for the comparability panel whose housing unit was not included in the permanent panel. The total size of the comparability panel is 755 urban renter households.

minor substantive changes; in addition, the instrument was revised so that it would also be suitable for use in Site II, Wave 2. NORC conducted a series of small pretests of the instrument in September. A similar cycle of revision and testing is planned for the landlord instrument during November and December. The annual cycle of relisting also began late in September.

Processing Wave 2 Field Reports

Completed interviews and other field reports are transmitted by the survey subcontractor to Rand's Survey Data Preparation Group (SDPG), where each document is manually edited, open-ended responses are coded, and all responses are keypunched to create a machine-readable record. This record is then "cleaned" by an interactive man-machine procedure: Response fields are checked by machine against preprogrammed specifications as to allowable values, appropriate skip patterns, and consistency between responses. Error messages are investigated by the editing staff, who consult the original document and sometimes contact the subcontractor's site staff for explanations or additional information. When the problem

that triggered the error message is resolved, the editor submits either a correction card or an override, and the record is updated and recycled through the cleaning program. A completely clean record is called an "edited field report."

During the period covered by this report, SDPG completed cleaning all records from the baseline surveys in Site I and transmitted them to the Data Systems Group (DSG), which maintains and processes the various experimental data files. This work began early in 1974, with the design of cleaning specifications for each survey instrument and its associated forms, and continued into January 1975. The file of edited field reports for the survey of residential buildings was delivered on 16 September 1974; it was followed on 4 October by a similar file for the survey of landlords; and on 18 October, by one for the survey of neighborhoods. The survey of tenants and homeowners was delayed by a variety of problems, including the coding of open-ended responses; its edited field reports file was delivered to DSG on 15 January 1975.

In preparing these files, SDPG processed a total of 21,086 completed survey questionnaires containing 10.7 million response fields, each of which was checked as described above. The checking generated 157,410 error messages to be resolved by the editors, an average of 1.5 messages per hundred response fields. In addition to the completed questionnaires, SDPG keypunched and cleaned 21,540 related documents such as vacancy, refusal, and validation reports and supplemental data forms.

During the first nine months of 1975, most of SDPG's work related to the baseline surveys in Site II, which are discussed in Sec. III of this report. However, by September the Wave 2 surveys from Site I had entered the processing cycle and were scheduled for delivery to DSG in February and March of 1976.

Compiling and Auditing Master Files

As each file of edited field reports from the baseline surveys was received by DSG, it was reformatted into fixed-length records with fixed-length fields, and all entries were transformed to binary floating-point representation—a standard file format that is economical to process and is compatible with the analytical software most often used. File teams staffed jointly by DAG and DSG then compiled and audited master files for each survey. Although plans had been detailed for the execution of these tasks, their first iteration revealed numerous problems for which solutions had to be improvised; consequently, completion of the tasks required considerably more time than had been anticipated.

The procedure that evolved during the course of the year (and which will be applied more efficiently to subsequent waves of survey data) divides into two stages for each survey, the first leading to the creation and documentation of a preliminary master file and the second to a final master file and an audit report.

In the first stage, edited field reports are checked against the survey sample list to ensure that the outcome of each field assignment is reflected either in a completed interview or field observation report or else in a report that explains why the assignment was not completed; and also to ensure that each edited field report relates to the correct property, building, housing unit, or person. When a satisfactory accounting is achieved, the appropriate set of records is assembled into a preliminary master file, documented by a survey codebook.

The codebook lists each question as it appears in the survey instrument, defines all allowable coded responses, and summarizes all pertinent interpretive instructions that governed interviewing, coding, and editing. For each question, it also contains a frequency distribution by response code of all responses recorded in the preliminary master file. Thus, the codebook completely describes the data base.

Codebook production is a cooperative effort by all four HASE research groups—Survey, Survey Data Preparation, Data Systems, and Design and Analysis. Since the major survey instruments contain 1,200 to 2,200 response fields, the preparation of an error-free codebook is a major enterprise.

In the second stage, DAG audits the preliminary master file. The audit has two major purposes. The first is to assess the validity of the sample of usable records, considered as a representation of the population surveyed; the second is to assess the reliability of the responses recorded in the file.[14]

The first purpose is fulfilled by an independent review of sample selection and a detailed comparison of survey respondents and nonrespondents to determine whether the file of completed interviews can properly be said to represent the population originally sampled, and what if any adjustments in sampling weights would improve this representation. Population estimates and distributions from the preliminary master file are compared with similar estimates from external sources and a search is conducted for internal evidence of nonresponse bias.

The second purpose is fulfilled by a review of field procedures and data preparation, including an analysis of interview validation reports and SDPG error messages; and by direct checks of the data recorded in the preliminary master file. A variety of internal consistency checks are applied to entries in each record, and cross-record checks are made for unusual distributions or outlying values of specific variables. Suspicious entries in the file are investigated and any clear errors are corrected; but for the most part, the audit comments on the data rather than changing them. Various record-condition indicators are added to each record and suspicious-data flags are appended to individual response fields where appropriate.

At the conclusion of this process, the preliminary master file becomes a final master file, where it is archived by DSG along with full documentation. Thereafter, the final master file is the source of all working files used in analyzing the survey data. Also, a detailed report on the findings of the survey audit is prepared and published.

At the end of September 1975, preliminary master files and codebooks had been compiled for the Site I screening survey and the baseline surveys of landlords, tenants and homeowners, and residential buildings in Site I, although one of the baseline codebooks had not yet been published in final form. Final master files had been prepared for the screening survey, the survey of landlords, and the survey of residential buildings, and the final master file for the survey of tenants and homeowners was nearing completion. The screening survey audit report was published in November 1974, and those for the three baseline files described above were in various stages of draft or editorial review.

The laggard is the survey of neighborhoods, which consists of two parts. One is a compilation of secondary data for each of 108 neighborhoods in Brown County; the other consists of field reports on each of 8,600 street segments observed from an

[14] See Leonard G. Chesler and others, *Baseline Audit Plan*, The Rand Corporation, WN-8612-HUD, February 1974.

automobile. The secondary data have been assembled into an audited final master file, but the street segment field reports were still being processed. Poor planning of field procedures led to numerous errors in the recording of street segment identifiers, which have required much effort to sort out.

Analyzing the Survey Data

Analysis of baseline survey data for Site I began in the spring of 1975, as the various preliminary master files were compiled. The analytical agenda naturally reflects the four clusters of research questions discussed in Sec. I and follows plans presented in the *General Design Report.* However, details of these plans evolve as the analysts become familiar with the data and consider the virtues of alternative technical methods of analysis. The main purpose of baseline analysis is to understand how the housing market worked before the allowance program began.

The first analytical report was published as a working note in April 1975 and the second, in August.[15] Both are based on data from the survey of landlords. By the end of September, data processing on the baseline files was virtually complete and three additional reports, one each based on the survey of landlords, the survey of tenants and homeowners, and the survey of residential buildings, were in various stages of draft and revision. Selected findings from these reports are presented in Sec. IV.

Auditing and Analyzing HAO Administrative Records

In addition to the survey data whose gathering, processing, and analysis are discussed above, the research program uses the administrative records of the Housing Allowance Office. These contain considerable information about each enrolled household and its housing both before and after enrollment.

The HAO maintains six machine-readable files (preliminary applications, original applications, client master, transactions history, payments history, and housing evaluation) whose records are keyed to client and/or housing unit identification numbers. These files are regularly batched and transmitted to Rand, where they are purged of client names and addresses and merged into two research files. The research files serve as the basis for the analysis of client characteristics and the effects of the program on them and their housing.

Administrative records covering the first year of program activity—19 June 1974 to 20 June 1975—were delivered to Rand at the end of the latter month. Members of the Design and Analysis and Data Systems groups developed procedures to link and abstract the six files for research purposes and prepared codebooks for the two research files—one on client characteristics and the other on housing evaluations. An audit of the entries on these files revealed numerous problems with the data, most of them reflecting procedural changes during the first six months of program operations. By the end of September 1975, a series of conferences with HAO staff in Green Bay had resolved most of the problems, and the files had been extensively updated from the hardcopy records of the HAO.

[15] C. Peter Rydell and Joseph Friedman, *Rental Housing in Site I: Market Structure and Conditions at Baseline,* The Rand Corporation, WN-8980-HUD, April 1975; and C. Peter Rydell, *Rental Housing in Site I: Characteristics of the Capital Stock at Baseline,* The Rand Corporation, WN-8978-HUD, August 1975.

DAG then began its analysis of the program data, some parts of which were completed in time for inclusion in this report (see Sec. IV).

Summary and Prospects

During the year covered by this report—October 1974 through September 1975—the second wave of field surveys in Site I was successfully conducted on the permanent panel of residential properties by a new fieldwork subcontractor. Survey completion rates were gratifyingly high, given the importance of five-year complete property records in our analytical plans. Except in the survey of residential buildings, where inaccurate reporting required refielding a number of cases, there were no early indications of major problems with the data. Planning for Wave 3, expected to be a routine operation, was under way at the end of the period.

Throughout the year, work continued on the records of the baseline surveys that were completed in April 1974. The complexity of individual records, the large volume of data, and a variety of ad hoc field procedures all contributed to delays in the preparation of accurate and internally consistent machine-readable records and their assembly into well-documented research files. Most procedures were being tried by HASE for the first time. By the end of the period, the data base was well under control, and enough had been learned to plan much more efficient and more rapid processing for Site II baseline survey records.

Audit and analysis of baseline data began in the spring of 1975 and was close to completion by the end of September. However, there was a serious bottleneck in the production of reports on these data, with close to a dozen authors' drafts in various stages of review, revision, and editorial processing. In any event, DAG's analysts were close enough to the end of their work on the baseline data from Site I to deal promptly with the baseline survey records for Site II, the first file of which was delivered in September.

During the coming months, methods must be developed to speed report production—the final and critical step in HASE research—without loss of quality in the product or substantial increases in the resources employed.

III. PROGRESS IN SITE II

St. Joseph County, Indiana, was selected as the second site of the Supply Experiment in April 1974, about a year after Brown County was chosen as the first site. By October 1974, the HAO had been organized there, and the first household was enrolled in the program in December. Applications were invited from the general public beginning in April 1975. By the end of September 1975, the HAO had received 5,600 preliminary applications, nearly 2,100 households had been enrolled, and payments were being made to over 1,000 households whose housing had been approved for occupancy.

Concurrently with the organization and development of the allowance program, the research program got under way in St. Joseph County. Fieldwork for survey sample selection began in May 1974, a screening survey of 10,000 households was concluded in August, and baseline interviews with the owners and occupants of some 4,000 residential properties were attempted between November 1974 and June 1975. In addition, field reports on over 5,000 residential buildings and 12,000 street segments were completed.

At Rand's offices in Santa Monica, screening survey records were processed during the fall of 1974 and screening survey data were analyzed both for sample selection and to provide the HAO with information that was needed to plan its operations. Estimates of program size and cost were completed in February 1975 and benefit standards reflecting local housing costs were recommended to and approved by HUD.

Processing the large volume of baseline survey records began early in 1975, as they were received from the field. At the beginning of September 1975, machine-readable records of the survey of landlords were delivered to the Design and Analysis Group for audit and analysis. By the end of September, records of the survey of tenants and homeowners were nearly ready for transfer, and other files were to follow. Finally, preparations were made for selecting the permanent panel of residential properties from among those surveyed at baseline.

The remainder of this section provides more detail on these events, first for the allowance program, then for the research program. Section V reports briefly on the results of our analysis of screening survey data on households and their housing in St. Joseph County and on the characteristics of those who enrolled in the allowance program during its first nine months.

IMPLEMENTING THE ALLOWANCE PROGRAM

Because of the characteristics sought for Site II of the Supply Experiment, site selection was a protracted process.[1] When St. Joseph County was chosen in February 1974, only the city of South Bend, with about 52 percent of the county's households, had agreed to participate in the allowance program. With the hope that other jurisdictions would join later, the HAO was organized there, enrollment being limit-

[1] See the *First Annual Report*, Sec. III, for details.

ed to residents of South Bend. That hope was in part fulfilled in June 1975, when St. Joseph County officials and the South Bend Housing Authority approved extension of program jurisdiction to encompass unincorporated territory within a five-mile radius of South Bend; in August, one of the three incorporated communities within this radius also voted to participate.

Experience gained in organizing and funding the Brown County HAO greatly simplified and shortened the corresponding tasks in South Bend. By September 1974, the HAO had been incorporated and legal agreements had been concluded between HUD, the South Bend Housing Authority, and the HAO, including provisions for federal funding in the form of a ten-year annual contributions contract.[2] By the end of November, all supervisory positions in the HAO had been filled and additional staff was recruited and trained for the earliest possible opening of enrollment. The new staff participated with its counterparts in Site I and with Rand's Field and Program Operations Group in revising the *HAO Handbook* that sets program standards and governs program operations. The handbook for South Bend was approved by HUD and the chairman of the HAO's board of trustees in mid-December, and the organization was then ready for limited operations with a staff of 18. When open enrollment began in April 1975, a total of 49 persons had been hired and trained.

Applications and Enrollment

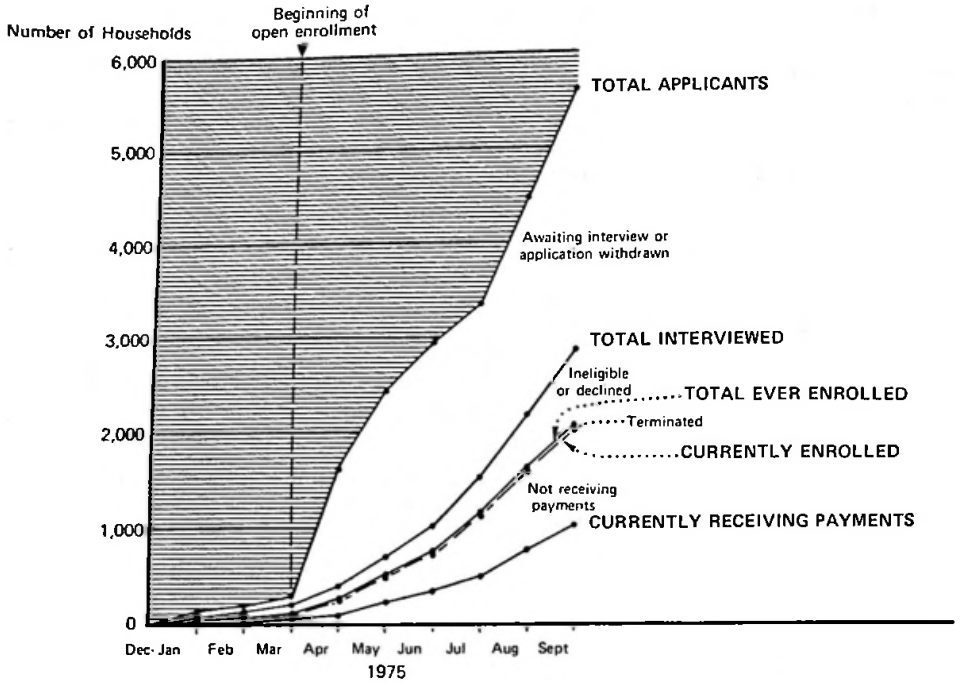
Although it would have been desirable from a research perspective to complete baseline interviews with landlords, tenants, and homeowners before beginning enrollment in the allowance program, HUD and Rand agreed that on balance it was more important to get the program under way promptly. However, a plan was developed to minimize contamination of baseline responses that might result from respondents being exposed to program publicity or contacts with the HAO.

By December, the baseline sample of homeowners had been selected and interviews with them were under way. Using tax records and referrals from welfare agencies, the HAO compiled a list of homeowners likely to be eligible for assistance, excluding any who were scheduled for survey interviews. Without much publicity, direct-mail invitations were extended to about 750 of these households beginning in mid-December and continuing through March 1975. The HAO began open enrollment on 2 April 1975, while cleanup work on baseline surveys continued. By then, interviews had been completed with about 65 percent of all tenants and homeowners and 88 percent of all landlords who eventually responded.

During the ten weeks of invitational enrollment, the HAO received 285 preliminary applications from homeowners, conducted 169 enrollment interviews, enrolled 103 households, and commenced payments to 48 whose housing units had been approved by HAO evaluators.

When enrollment was opened to the general public at the beginning of April, the response was unexpectedly large. As shown in Fig. 3.1, the HAO received over 1,350 preliminary applications in April and an additional 750 in May. To avoid an even larger backlog, outreach publicity was suspended while the staff struggled to arrange enrollment interviews, verify applicants' incomes, determine their eligibili-

[2] See Appendix B for a more detailed chronology of events prior to October 1974, the beginning of the year reviewed here.



SOURCE: HAO records for Site II through 26 September 1975

Fig. 3.1—Applications, enrollment, and participation status: South Bend housing allowance program, December 1974 to September 1975

ty and allowance entitlement, and evaluate the housing of those who enrolled. From April through June, 300 to 400 applicants per month were interviewed. Subsequently, two staffing increases were approved by HUD, and in August the HAO was able to conduct 900 enrollment interviews.

By the end of September, the HAO had received 5,600 applications, completed 2,855 enrollment interviews, enrolled 2,080 households, and made payments to 1,042 participants. Moreover, up to that point, the pace of enrollment had been governed almost entirely by the administrative capacity of the HAO; an advertising campaign begun early in August had brought in nearly 2,200 new preliminary applications in two months, more than could be promptly processed.

Experience in Site I had not led us to expect the large number of applications received in Site II during the first six months of open enrollment. For half of this period, enrollment was open only to residents of South Bend, which has a slightly smaller population than all of Brown County. Estimates based on screening survey data for each site indicated that about 9,400 households in South Bend were eligible, as compared with over 12,200 in Brown County.[3] Expansion of the program's jurisdiction in June gave Site II a slight edge in total population, but not in numbers of eligible households. Yet after six months of open enrollment, the Brown County HAO had received only 3,000 applications, and the 5,600 mark was not reached there until the twelfth month.

[3] As noted in Sec. IV, analysis of baseline survey data for Site I has led us to reduce our estimate of the eligible population there to 8,100 households, exclusive of those then living in federally subsidized units. It is likely that the Site II estimate will also shrink when baseline data are analyzed.

In retrospect, three differences between the sites seem to be important in accounting for their different levels of response. First, there are more households with very low incomes among those eligible to participate in South Bend than in Brown County. For instance, the average annual income of homeowners receiving allowance payments in Brown County at the end of September 1975 was $4,758; in St. Joseph County, the corresponding figure was $4,251, or $500 less. For renters, the differences are even more dramatic: $4,136 in Brown County vs. $2,893 in St. Joseph County. Lower incomes result in larger benefits, providing stronger incentives to enroll.

Second, we believe there are important differences between the two sites in community attitudes toward federal assistance programs of all types. These differences are discussed later in this section, but their import here is that a larger proportion of the eligible households in Site II were ready to seek assistance in meeting their housing expenses.

Finally, it is likely that the publicity attendant on the extended negotiations with local governments prior to site selection had the favorable effect of informing people about the nature of the program and its possible benefits to them.

It is too soon to forecast the eventual level of enrollment in St. Joseph County, particularly since the pool of eligible households may or may not be enlarged by the extension of the program to additional jurisdictions, the largest of which is the city of Mishawaka. However, the program ceiling of 9,638 households specified in the annual contributions contract will enable the HAO to maintain open enrollment for the foreseeable future.

Outreach

The eventual objective of the HAO's outreach activities is to inform as many as possible of St. Joseph County's residents about the program and its potential benefits to them. In the short run, however, it is important to modulate outreach so as to avoid large backlogs of applicants and the consequent delays in responding to them.

The direct-mail invitations to homeowners in low-income neighborhoods, issued without fanfare in December 1974 and January 1975, were not very successful in attracting applications. The HAO then solicited referrals from local welfare agencies and these were more productive. As the scheduled date for open enrollment approached, presentations about the program were made to local organizations, and considerable publicity was obtained through television appearances by Rand and HAO staff and through coverage of HAO activities by the local newspapers.

Because of the flood of applications following the opening of enrollment, outreach activities were reduced from April to July. In August, as the backlog of unprocessed applications dwindled, a four-week outreach campaign was undertaken, using paid advertising on local television and radio stations and in local newpapers. The effort was quite successful in stimulating as many applications as the HAO could handle, so advertising was reduced to a "maintenance level" thereafter.

To date, the only real problem in outreach has been to communicate eligibility standards in such a way that both eligible and ineligible households can recognize their statuses and act accordingly. The critical issue is often the household's adjusted gross income, calculated differently depending on details of household composition and circumstances. Thus, it is difficult to specify a generally applicable limit in a brochure or advertisement.

The HAO now discusses eligibility standards by telephone with each applicant prior to scheduling a personal interview, and some 675 applications have been withdrawn pursuant to these conversations. The success of this approach is reflected in the fact that only 23 percent of those who have attended enrollment interviews have proved to be ineligible or have failed to complete the interview. (Before the HAO adopted telephone screening, about half those who attended enrollment interviews proved to be ineligible.)

Enrollment Certification

Following the completion of an enrollment interview, the completed application and supporting documents are reviewed by the HAO's certification section for errors in computations or in the application of program standards. Further, the applications are sampled for verification of undocumented information submitted by the applicant, the sampling rate varying with the amount of documentation he supplies. Verification entails contacting the applicant's employer or other income sources, recontacting the applicant concerning ambiguous or inconsistent entries, and so forth.[4]

Through September 1975, 2,855 enrollment interviews had been processed, 1,093 of which were sampled for verification. Of the 520 completed verifications, only 31 revealed that between the information submitted by the client and that obtained from other sources there were discrepancies which significantly affected eligibility or allowance entitlement. Most of the discrepancies have related to income; a few have related to assets, and a few to disability status. Altogether, 2,206 applicants have been certified eligible, but 126 of these subsequently declined to enroll. Thus, total enrollment to date amounts to 2,080 households.

Each client's eligibility and allowance entitlement are reviewed semiannually. The first semiannual recertifications were initiated in September, and their volume will increase steadily over the coming months.

Housing Evaluation and Payment Authorization

Once a client is enrolled, his housing unit must be evaluated and approved by the HAO's housing evaluation section before allowance payments can be made to him. Through September 1975, the HAO had evaluated 2,869 housing units, an average of 1.4 units per enrolled client. Payments have been authorized for 1,042 clients whose housing was either initially certifiable or subsequently improved to program standards, or who moved to a certifiable unit.

Housing evaluation failure rates have been consistently higher in St. Joseph County than in Brown County, a fact that reflects other evidence as to the relative quality and condition of housing in the two sites. To date, about 64 percent of all units have failed their initial evaluations. About a third of the failures have been due to the lack of adequate facilities (too few electrical outlets, inadequate space heating, no hot water, etc.), and 56 percent to health or safety hazards (no handrails, inadequately vented heaters, dangerous electrical wiring, etc.). As in Brown County,

[4] No one is contacted for information about an applicant without the applicant's written permission; but failure to grant this permission is cause for refusing the application unless the applicant is able to supply full documentation.

failures due exclusively to overcrowding have been rare—about 2 percent of the total.

Analysis of records for a systematic sample of 99 failures indicated that about half reflected conditions that would probably cost over $150 to remedy, the same proportion applying to both renters and homeowners. This finding differs strikingly from the evidence that most defects in Brown County were cheaply and easily remedied (see Sec. IV). Nonetheless, 525 units out of the 1,163 that failed their initial evaluations were subsequently repaired, reevaluated, and approved.

Housing Information and Equal Opportunity Services

The housing information section of the HAO has four major functions. Its staff responds to telephoned inquiries about the program and accepts preliminary applications if appropriate; conducts program and housing information sessions for applicants and enrollees; and assists clients who believe that they have been discriminated against by suppliers of housing or by market intermediaries.

So far, the greater part of the section's workload has been responding to telephone inquiries about the program, in the course of which the caller often decides to apply for assistance. The HAO accepts preliminary applications by telephone, thus saving the applicant a trip to the office and saving the HAO the expense of mailing an application form. Over 90 percent of all preliminary applications are taken by telephone.

Applicants are urged to attend one of two group sessions (either for renters or for homeowners) at which program rules and administrative procedures are explained. After enrollment, they are invited to additional sessions that provide general advice about the rights and responsibilities of tenants, factors to consider in choosing a house and a neighborhood, the mechanics of home purchase, how to finance and arrange for home improvements, and the equal opportunity services offered by the HAO.

As in Brown County, attendance at these voluntary group sessions has been poor, despite considerable effort by the HAO to make them attractive and convenient. To date, 72 sessions have been conducted, with a total attendance of 296 persons, or an average of 4.1 persons per session. Although few attend, those who do come are nearly unanimous in the view that the sessions are interesting and informative and that their time was well spent. On the other hand, the HAO recently completed an analysis of the preenrollment group sessions at which program rules are explained, the main conclusion of which was that these sessions complicated the scheduling of enrollment interviews without reducing the amount of individual attention needed to complete the enrollment process.

So far, 13 complaints about housing discrimination have been filed with the HAO by eight black and two Chicano clients; all but two were households headed by women. These cases were referred to the Legal Aid Society of St. Joseph County, which is retained by the HAO to provide legal advice to program clients on equal opportunity issues. Twelve of the cases have been closed without action against the landlord, either because the evidence was insubstantial or because the complainant lost interest. One case was taken to court, but the judge ruled against the plaintiff for lack of substantial evidence.

Institutional Development

Although the HAO was incorporated in July 1974, and its funding arrangements were completed in September, its development as an institution occurred mostly during the year covered by this report, October 1974 through September 1975. There were three concurrent tracks of development: hiring and training staff, planning administrative procedures and the flow of work, and establishing lines of communication with local governments and major interest groups in the community. Progress was rapid on all fronts.

Staffing and Program Development Both staffing and administrative planning were facilitated by the transferability of experience with similar functions in Site I. Thus, the table of organization and job descriptions of the Brown County HAO were adopted also for South Bend. While the South Bend HAO was being organized, the *HAO Handbook* that had been developed for Brown County was being revised to reflect experience gained from operations there, a process in which the newly hired supervisory staff of the South Bend HAO participated.

In mid-October, a draft *HAO Handbook* for South Bend was submitted to HUD for its review. Early in November, Rand recommended benefit standards for South Bend based on data from the screening survey conducted there in July and August. By the end of November, all the supervisory and many of the subordinate positions in the HAO were filled and the staff was being trained in program procedures.

A readiness review on 5 December cleared the way for invitational enrollment beginning on 12 December, less than five months after the HAO was incorporated. At the end of December, the HAO moved from temporary office space acquired in September to permanent quarters on the fringe of South Bend's central business district. As in Site I, these quarters were renovated and furnished to allow an efficient flow of traffic and to provide a comfortable and reassuring ambience for clients.

Staff members were hired in planned stages as both management capability and workload increased. By the end of March 1975, all staff sections were trained and operating under the procedures set out in the *Handbook* and other manuals. The machine records system designed for Site I had been successfully transferred to South Bend and was in partial operation, its uses including the automatic weekly production of management information reports. In April 1975, all but two of the planned complement of 51 persons had been hired, but the unexpectedly large flood of applicants led the HAO to request and HUD to approve two staffing increases; by the end of July, 70 persons were employed.

As in Site I, the HAO in South Bend plans an annual audit by a firm of certified public accountants. The first such audit covered the period from the first receipt of funds by the HAO in September 1974 through the end of the calendar year. Because the first enrollment had just occurred, this audit did not include the as-yet-inactive payments system, but the auditors found no problems with the HAO's accounting for funds received and disbursed for wages and salaries, office space and equipment, and supplies.

Developing Rapport with the Community As in Site I, the South Bend HAO is governed by a board of trustees consisting of Rand's site manager, five other employees of The Rand Corporation, and two prominent South Bend citizens. During the formative months, the board met frequently to consider the many issues of policy

and staff selection that arose. Rand's site manager for the experiment, as chairman of the board of trustees, is well placed both to learn about HAO problems in their early stages and to see that the board's decisions are promptly implemented.

There are two other official bodies to whom the HAO regularly reports. One is the South Bend Housing Authority (SBHA), which is the conduit for federal funds disbursed pursuant to the annual contributions contract and which has contracted with the HAO for the latter to administer the program. The HAO's director and Rand's site manager meet monthly with the housing authority to report on the progress of the allowance program and to review proposed *Handbook* changes and operating budgets. The second body is an advisory committee of 28 public officials and citizens that meets every two months to review the program. Its members in turn inform their constituencies about the program and provide useful feedback from the community.

In addition to these formal relationships, the HAO has made a considerable effort to brief other influential organizations in the community on the program's purposes and progress. Since the opening of the Rand site office, 91 presentations have been made to such groups, including the county and city councils, civic groups, welfare agencies, business clubs, and fraternal, ethnic, and religious organizations.

Extending the Program's Jurisdiction

Both legally under Sec. 23 and as a practical matter, operation of the housing allowance probram within a local jurisdiction requires the approval of the governing body of that jurisdiction. As explained in detail in the *First Annual Report*, early negotiations in St. Joseph County led to acceptance of the program only by the city of South Bend, and the HAO began operations with enrollment limited to South Bend residents, about 52 percent of the county's households. From an administrative perspective, this limitation presented no problems; but from an experimental perspective, it was highly desirable to extend the program's jurisdiction to encompass the entire metropolitan housing market.

The initially excluded portions of the market consisted of the adjoining city of Mishawaka, with 15 percent of the county's households; seven small incorporated communities, together accounting for 3 percent; and the unincorporated balance of the county, with 30 percent. Over the past eight months, representatives of HUD, Rand, and the HAO have met frequently with the governing bodies of these jurisdictions to explain how the program operates and to invite their participation.

A major breakthrough occurred late in June 1975, when county officials agreed to allow the program to operate in the unincorporated areas of the county that lie within five miles of the boundary of South Bend (see Fig. 3.2). Under state law, this extension was possible without restructuring the existing contractual arrangements between HUD and the SBHA. Extension of the program to the unincorporated remainder of the county will require creation of a countywide housing authority to contract separately or jointly with the SBHA for program funds.

Early in August, one of the seven outlying towns voted to join the program, and it seems likely that most of the others will follow soon. With or without them, enrollment is now open to about 75 percent of the county's households, and the only major question remaining is whether Mishawaka will join. Early in 1974, its city council voted 5-4 against participation, but the issue is still alive and will probably

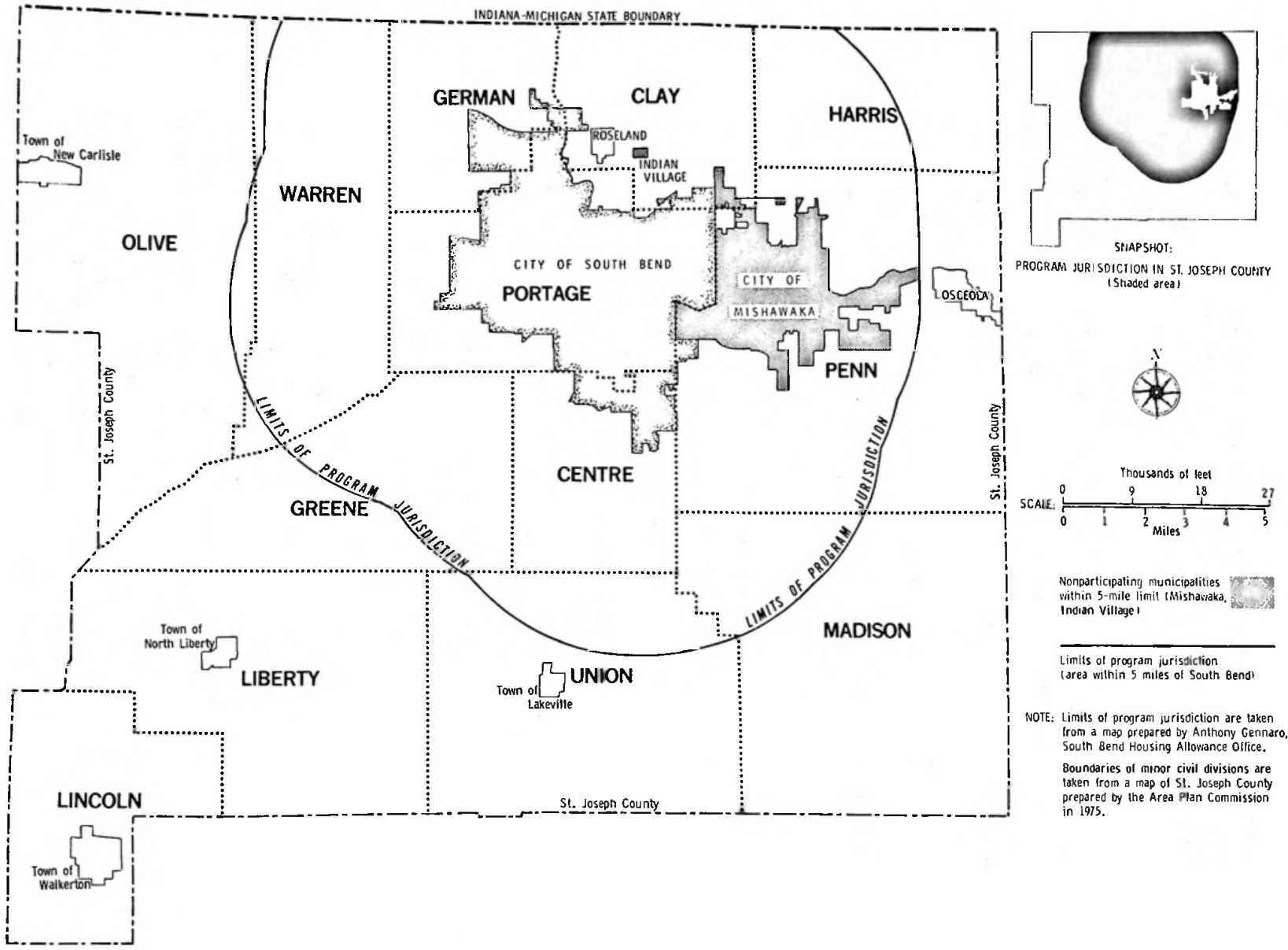


Fig. 3.2—Jurisdiction of the South Bend housing allowance program in September 1975

be reconsidered in the spring of 1976. Both the city council and the Mishawaka Housing Authority must agree to the program if it is to operate there, and the housing authority must become a party to the annual contributions contract.

Client and Community Attitudes

Although the allowance program in St. Joseph County has been active (in the sense of open enrollment) for only six months vs. fifteen months in Brown County, its pace of enrollment has been faster. Both among potential clients and in the community at large, it is already clear that there are significant differences between the two sites in attitudes and responses to the program.

Applicants and Enrollees. The relatively large number of applications received in the early months of enrollment in Site II as compared with Site I testifies in part to the larger number of households in Site II whose incomes are very low, but also the greater willingness of low-income households to seek federal housing assistance. Unlike Brown County's residents, many people in South Bend have experience with federal assistance programs, some of which became important to their survival when the Studebaker factory closed in 1963. Since then, the city of South Bend, the South Bend Housing Authority, and local builders have all made extensive use of federal housing and redevelopment subsidies, so the housing allowance program is less of a novelty here than in Brown County.

Although applicants and enrollees have expressed many of the same concerns as their counterparts in Site I, it is especially striking that the lease-leaseback requirement for homeowners (no longer in effect) does not appear to have dissuaded those in Site II from participating to the same extent it did in Site I. At any rate, the 60-40 ratio of renter to homeowner enrollments in Site I is nearly reversed in Site II.

Complaints from applicants or enrolled clients about the performance of the HAO staff have been rare. Rather, their concerns have related to aspects of program design and program standards that affected them adversely. The lease requirement for renters and the lease-leaseback requirement for homeowners, the schedule of standard housing costs that enters into benefit computations, and the exclusion from the program of single persons under 62 have all been troublesome issues in both sites. But in Site II, with its lower incomes and worse housing, the most frequent complaint has been that a substandard unit must be improved *before* its occupant can receive allowance payments.

Many applicants think that the HAO either does or should provide loans, grants, or advances for housing improvements, rather than making an enrollee wait for monthly allowance payments until he has either arranged for repairs to his present dwelling or found another that meets program standards. This issue is exacerbated by the relatively high failure rate on initial evaluations (64 percent, vs. 49 percent in Site I), the greater severity of defects, and the greater incidence of applications from homeowners who effectively lack the renter's option of moving.

The problem is a genuine one for clients, but the program rules that generate it do not reflect absence of forethought. The experiment is designed to test whether landlords and homeowners can in fact muster the capital resources for needed repairs and rehabilitation, given the promise of subsequent benefits; and whether local private and public institutions will help them. As discussed further below,

there are signs that private loans for these purposes will be available to program participants with respectable credit histories; and in South Bend at least, a substantial sum of Community Development funds has been earmarked specifically for rehabilitation grants and loans.

Community Leaders and Interest Groups. From the beginning, community leaders and interest groups in St. Joseph County have been divided in their views of the program, some supporting it vigorously, others opposing it altogether or seeking basic changes in its management or policies. This pattern contrasts sharply with the leadership consensus in Brown County, where no organized opposition to the program has ever surfaced.

The difference between sites in this respect was not unexpected. St. Joseph County has a considerably more complex social and political structure than Brown County, with organized competition for political power and influence between Republicans and Democrats, cities and suburbs, and a variety of racial and ethnic groups.

The most consistent support for the program has come from the mayor and city council of South Bend, whose strong endorsement convinced HUD and Rand that St. Joseph County was a viable experimental site. Officials of Mishawaka and the county have been divided, probing repeatedly into the contractual relationships that would be required for their participation and into issues of program design and operation. Some have questioned the need for the program outside of South Bend, whereas others have been concerned about possible adverse effects on their communities. The long negotiations during the fall and winter of 1973-74 were well publicized, both positive and negative views being aired in the local press.

The subsequent reversal of the county's position was preceded by elections and a reorganization of the county government that significantly changed the membership and powers of its two governing bodies. Although several candidates took stands on the program, it was not a key issue in the campaign. Probably more important, the HAO had been organized and several of its key positions filled by well-known and widely respected local residents. There have also been changes in the membership of the Mishawaka city council, but how the new members view the allowance program is unknown.

Several local organizations have been actively interested in the program. One civic group that provides social services to the elderly has lobbied for the program, whereas a taxpayers' association has been persistently hostile and a group that operates social programs in low-income neighborhoods was at least briefly so. Leaders of two organizations representing racial or ethnic minorities have not opposed the program in principle but have attacked program features that seemed to them prejudicial to their constituents' interests. One, an officer of the local branch of the NAACP, sought a more forceful desegregation policy; others, representing a Chicano organization, successfully sought revision of the HAO's policy of delaying action on enrollment of new residents of the county. A local developer urged Mishawaka officials to reject the program on the grounds that its adoption would forestall the allotment of federal subsidies for new rental housing under Sec. 236 of the National Housing Act.

Some objections have related more narrowly to program management. Thus, a labor union erroneously accused the HAO of improper conduct in soliciting bids from nonunionized firms for renovation of its permanent quarters, and the owner

of a downtown office building complained publicly that the HAO's choice of office space failed to support the city's policy of reinvigorating the central business district.

The white ethnic groups that are so important in the social and political structure of the county have not formulated positions for or against the program, although some of their leaders have offered public support. The one exception is a group of Hungarian immigrants that persuaded one of its members to withdraw an application for enrollment because they felt threatened by the required submission of information on household composition and income.

The activity of these organizations and individuals contrasts strikingly with events in Brown County, where there has been no organized criticism of the allowance program. It is also notable that, with the exception of the taxpayers' association and the Hungarian group, the complaints have been based less in philosophical objections to the allowance program than in concerns for the interests of a special constituency of the program.

Nonparticipating Citizens. The annual surveys of landlords, tenants, and homeowners described later in this section include questions designed to elicit the respondents' understanding of and attitudes toward the allowance program. However, until data from the Wave 2 surveys—beginning after nine months of program operations—are analyzed, we have no systematic way of measuring the views of ordinary citizens who have no direct connection with the program. Conclusions from anecdotal evidence are unreliable.

Nonetheless, our resident observers report that they encounter at least a normal quota of negative views, more from people who live in suburban and rural communities than from residents of South Bend. Some voice objections in principle either to federal intervention in local problems or to the redistributive nature of the program. Others are skeptical of the ability of the HAO to conduct its affairs efficiently and suspect that client misrepresentations will be frequent and undetected. Some have felt that there should be a larger local voice in setting program standards and operating procedures, although others readily accept the necessity of outside control, given the experimental purposes of the program.

In citing these negative views, we do not mean to leave the impression that the program is generally unpopular. The staffs of the HAO and of Rand's site office have heard many more favorable than unfavorable comments from citizens who have no direct stake in the program. The favorable comments emphasize benefits to people who, through no fault of their own, have difficulty maintaining their homes; and benefits to the community from general housing improvement.

Program Reinforcement Through Local Action

A substantively important development in South Bend that is also an indicator of the city's continued interest in the allowance program is the recently approved Community Development program. Using funds granted by HUD, the city has launched several programs of housing improvement that were designed in whole or in part to support the allowance program.

The most significant is a program designed specifically to help elderly homeowners who have enrolled in the housing allowance program but whose homes failed their initial evaluation. Upon application by an eligible homeowner, the Community

Development Department reviews the HAO evaluation report, helps the homeowner to arrange for the needed repairs, and pays repair costs up to $5,000. Community Development funds amounting to $100,000 have been allocated to this program.

The city has also contracted with a consortium of South Bend banks to guarantee home improvement loans made by the banks to homeowners in three deteriorating neighborhoods. The consortium has committed $200,000 for such loans, which will carry an interest rate of 9.0 percent—well below the current market rate on comparable loans (about 12 percent). Lending decisions will be made by an advisory board composed of representatives of each member bank, the city's Community Development Department, and the affected neighborhood; and the repair work will be monitored by the Community Development Department.

These loans are not restricted to homeowners who have enrolled in the allowance program, but the organizers of the loan program see a close relation between it and the allowance program. The loan program provides allowance-eligible homeowners with access to capital they may need to improve their homes to program standards and thus qualify for allowance payments. The allowance payments in turn will help pay the carrying costs of such loans, decreasing the risk of default.

Three other elements of the Community Development program are continuation of city-administered housing rehabilitation grants in certain badly deteriorated census tracts ($535,000); grants to nonprofit groups that sponsor housing rehabilitation ($50,000); and a citywide emergency repair program ($150,000). Altogether, these local efforts are likely to make a considerable difference in the ability of allowance program clients to secure housing that meets program standards; and conversely, the allowance program will help make the rehabilitation achieved with Community Development funds more enduring.

Near-term Prospects

During the coming year, the HAO's primary concerns will be outreach and enrollment processing. The goal is to generate a steady flow of applications whose volume fully utilizes but does not overtax the administrative capacity of the institution, until the pool of eligible and interested households is exhausted. As experience in both sites has shown, each new outreach initiative tends to produce a burst of new applications rather than a sustained yield. To avoid excessive backlogs and consequent processing delays, the timing and intensity of outreach compaigns must be carefully planned and flexibly executed. The HAO expects to shift somewhat during the coming year from broadcast methods of outreach to methods designed to reach special groups of potential clients, e.g., residents of specific low-income neighborhoods.

A second major issue, affecting the eventual size of the program (and thus the size of the staff needed to operate it) is the further expansion of program jurisdiction. For experimental reasons, it is highly desirable that the program encompass the entire metropolitan housing market, the most critical missing piece of which is Mishawaka, with 15 percent of the county's households. It is generally believed that the Mishawaka city council will reconsider its earlier decision not to participate after the newly elected council members take their seats in January 1976. There are a variety of reasons for supposing that the turnover of membership, combined with the program's generally favorable image in the community, will result in a decision

to participate. To be effective, such a decision will also require the concurrence of the Mishawaka Housing Authority.

Further action to bring the outlying parts of the county into the program is also expected from the county government. In the meantime, incorporated municipalities throughout the county (there are seven, all of them small) are eligible to join the program and one (Roseland) has already done so.

During the past year, the HAO has encountered many opportunities for misadventure in St. Joseph County's intensely partisan political life. Though it has so far escaped any factional identification or embroilment, there is every reason to expect these perils to recur. Maintaining good relationships with elected officials, public agencies, and a variety of private organizations will continue to require considerable attention both from the senior staff of the HAO and from Rand's site manager.

IMPLEMENTING THE RESEARCH PROGRAM

Research activities in Site II follow the same pattern as in Site I, but with a year's lag due to the delay in choosing the second site. An important consequence of this relationship is that each new step in the research program is first tested in Site I, then modified on the basis of that experience before being implemented in Site II. So far, this principle has operated in survey sample selection, baseline instrument design, field procedures, and data preparation. At the close of the period covered by this report, it was operating in our plans for audit and analysis of the baseline surveys and for selection of the permanent panel of residential properties.

The general consequence is that most steps in the Site II research program have been completed in a shorter time, with less strain on the research staff and fieldwork subcontractor and fewer improvisations of the kinds that leave a heritage of irregularities in the data base. These benefits were especially valuable because the environment for field research in Site II is notably less hospitable than in Site I.

The survey subcontractor selected for Site II is Westat, Inc. However, unlike the arrangement in Site I, Rand's Survey Group directly operated the initial fieldwork for survey sample selection, a tax record search conducted in May 1974. Westat conducted the screening survey that ensued in July and August. At the beginning of the period covered by this report, the records of the screening survey had been coded, keypunched, and cleaned and were ready to serve their main function, providing information needed to stratify residential properties prior to baseline sample selection.

Results of the Screening Survey

Our first intimations of the relative difficulty of survey fieldwork in St. Joseph County (as compared with Brown County) came as we reviewed field reports from the screening survey. The survey entailed attempted interviews with the occupants of about 10,000 housing units on 7,321 separate properties throughout the county. In fact, we obtained only 6,066 completed interviews and 1,005 vacancy reports. Despite up to four attempts during the six-week field period, Westat's fieldworkers were unable to contact a suitable respondent in any of 1,601 occupied housing units; and in another 1,286 cases, the occupant refused to be interviewed.

Table 3.1 compares these results with corresponding data for Site I. Despite refusals, contact failures, and vacancies, we were able in Site I to obtain interview data on 83 percent of the housing units in our sample; in Site II, we obtained interview data on only 61 percent. Not only was the incidence of vacant units in Site II more than twice that in Site I, but both contact failures for occupied units and refusals by contacted respondents also occurred more than twice as often in Site II.

Table 3.1

Comparison of Screening Survey Field Results: Site I and Site II

Item	Site I	Site II
Number of Housing Units		
Completed interview	8,646	6,066
Refusal or break-off	613	1,304
No contact with respondent	765	1,601
Vacant	453	1,005
Total survey sample[a]	10,477	9,976
Summary Statistics		
Sample completion rate[b]	.83	.61
Field completion rate[c]	.86	.68
Field response rate[d]	.93	.82

SOURCE: David M. de Ferranti, Ira S. Lowry, and others, *Screening Survey Audit Report for Site I*, The Rand Corporation, WN-8684-HUD, November 1974, Tables 4 and 5; Daniel A. Relles, *Selecting the Baseline Sample of Residential Properties: Site II*, The Rand Corporation, WN-9027-HUD, October 1975, Table 12.

[a] Excludes housing units listed for interviewing but discovered in the field to be unsuitable for inclusion in the survey sample (e.g., demolished structures).

[b] Completed interviews/total sample.

[c] Completed interviews/total interview attempts.

[d] Completed interviews/total contacts.

After analyzing the field results and comparing training and field procedures in the two screening surveys, we were persuaded that the relatively poor results in Site II reflected characteristics of its population rather than problems with survey management. The higher vacancy rate was expected. The more frequent refusals seemed to reflect a greater suspicion of strangers in the more heterogeneous community and a lesser sense of obligation to cooperate with scientific research. The more frequent contact failures were harder to explain, except insofar as our Site II sample of households may have included more with working wives or employed single heads, so that it was harder to find anyone at home.[5]

[5] The Site II screening survey experience is much more consistent with other recent experience in urban interview surveys than is the Site I experience. Although comparable data are not readily available, sample completion rates have been dropping for some years. Most survey research organizations now regard a sample completion rate of 65 percent as normal.

Although these results did not bode well for the success of the baseline surveys, the immediate problem was that the screening survey had not yielded any information from the occupants of 30 percent of the properties that needed to be stratified prior to baseline sample selection. Using information from other sources (interviewers' direct observations, tax records), we were able to stratify 85 percent of the sample as to location, tenure, and type of housing, and about 80 percent as to rent or value. Over a thousand single-family houses could not be stratified as to tenure, which meant that more would have to be included in the baseline survey sample than would have been necessary if they had been prestratified.

Selecting the Baseline Sample of Residential Properties

Specifications for the baseline sample of residential properties derived from those for the permanent panel, which was to consist of 2,015 properties allocated among eighteen sampling strata. To be eligible for inclusion in the permanent panel, a property was required to have a complete baseline record. For rental properties, a complete record was defined as a completed landlord interview, at least one completed tenant interview (or a vacancy report), and a completed field report on the property's residential buildings. For ownership properties, we required a completed interview with the owner-occupant and a field report on the building.

Basing our assumptions about survey completion rates for different classes of respondents on both Site I experience and the results of the Site II screening survey, we estimated the number of properties in each stratum that should be listed for surveying in order to obtain the desired number of complete baseline records in that stratum.

These calculations led us to select a baseline survey sample list of 4,333 residential properties, about 100 fewer than in Site I.[6] It included 2,797 properties believed to be rental, 703 believed to be owner-occupied homes, three rooming houses, 20 mobile home properties, and 810 single-family homes whose tenure was uncertain. About 80 percent of the last group were listed conditionally, their owners and occupants to be interviewed only if further investigation established that the properties were rental.[7]

For large rental properties, there was an additional step, the selection of a sample of housing units whose occupants were to be interviewed. In Site I, all units on properties with eight or fewer units were scheduled for interview attempts; and on each larger property, a random sample of eight units was chosen. This plan worked well enough because no rental properties in Site I were very large. In Site II, however, there were a number of large properties with garden apartments and townhouses on them, one of which had nearly 800 units. A new sampling rule was devised to fit this circumstance: All units on properties with six or fewer units were scheduled for interview attempts; and on each larger property, a random sample of

[6] The Site II baseline sample was smaller despite the stratification problems and expected nonresponse problems noted above because the planned size of the permanent panel was smaller. In Site II, there was no baseline stratum of seasonal homes, and design targets for other strata had been reduced by 10 percent below those used to plan the Site I baseline survey. Similar design changes were made in Site I *after* completion of the baseline surveys. See the *First Annual Report*, pp. 59-60.

[7] For details, see Daniel A. Relles, *Selecting the Baseline Sample of Residential Properties*, The Rand Corporation, WN-9027-HUD, October 1975, Sec. V.

up to 36 units was chosen, the number in the sample increasing with the number on the property.

Baseline sample selection was completed on 18 November 1974 and the sample list of 4,333 properties, 6,980 housing units, and 5,349 residential buildings was immediately used to generate field materials for the survey subcontractor.

Selecting the Comparability Sample of Urban Renter Households

In addition to the samples of residential properties, housing units, and buildings described above, Rand selected a sample of urban renter households to be interviewed as candidates for the Urban Institute's cross-experimental comparability panel. These were households that appeared to be eligible for enrollment in the housing allowance program. Those who completed baseline interviews were to be empaneled and reinterviewed annually if they could be located anywhere within St. Joseph County.

A search of screening survey records turned up 566 households that met the Urban Institute's design specifications, of which 450 lived in housing units already included in the baseline sample of residential properties. All 566 were scheduled for baseline interviews, but that number fell considerably short of the Urban Institute design target; so in March 1975, the sample was augmented at the institute's request by another 533 households of less certain eligibility.

Revising the Baseline Survey Instruments

The baseline survey instruments that had been used in Site I were reviewed by Rand staff and the survey subcontractor during the summer of 1974. Individual questions and skip patterns that had caused difficulties in the field or in subsequent analysis of the data were revised, some questions that had not proved useful in Site I were dropped, and some new questions were added.

Particular attention was given to reformatting the instruments for the surveys of tenants, homeowners, lodgers, and occupants of mobile homes. There are marked differences in the physical characteristics of the housing occupied by each of these four groups, as well as in their tenure with respect to the housing unit and the land it occupies. Consequently, questions appropriate for one group are often inappropriate for another—e.g., questions about mortgage financing apply only to homeowners, questions about landlords apply only to renters, and questions about neighboring tenants apply only to occupants of multiple dwellings.

In Site I, our instrument designers included specialized question sequences for tenants and for homeowners in a single instrument, the choice of questions being governed by skip patterns. However, we found it necessary to create separate instruments for lodgers and for occupants of mobile homes. Thus, the general survey of households was conducted with three separate instruments, only one of which was used in any given case.

This arrangement worked well enough in the field but was inconvenient in other respects, especially considering that two of the instruments applied to very small numbers of respondents. Despite the fact that most questions were common to all three instruments, each had to be produced and printed separately, each required

separate cleaning specifications, and analysis of the machine-readable records had to be done separately for each type of record.[8]

Consequently, a major effort was made to integrate these three instruments. This task was accomplished by grouping the questions into common and specialized modules, the fieldworker choosing the appropriate special module for a given type of respondent.

Attention was also given to the instrument for the survey of residential buildings. In this case, the problem was one of devising reliable scales for field observers to use in rating the quality or condition of various features of a building. Experience with the Site I instrument indicated that the scales used there yielded ratings with relatively low orders of independent reproducibility. For Site II, most such questions were redesigned in ways that entailed more enumeration of objective detail and less subjective judgment.

The revised instruments were pretested early in the fall and the final versions were produced and printed before they were needed for interviewer training and fieldwork.

Conducting the Baseline Surveys

Westat began the baseline cycle of fieldwork on 9 September by searching tax records and deeds to identify the owners of rental properties who would be candidates for landlord interviews. A week later, the survey of neighborhoods was launched; by the end of November, observations of land use, housing characteristics, and public facilities on 12,136 street segments had been recorded by fieldworkers who drove down each street in St. Joseph County.

The survey of neighborhoods was completed about ten days after Rand had selected the baseline sample of residential properties, and Westat immediately entered the field with the surveys of landlords, tenants, and homeowners. As noted earlier in this section, the pace of fieldwork was driven by the aim to complete as many interviews as possible before the HAO launched its enrollment campaign. By 2 April 1975, when open enrollment began, interviews had been completed with 88 percent of all landlords and 65 percent of all tenants and homeowners who eventually responded. However, fieldwork for both surveys continued until 20 June. The survey of residential buildings, difficult to administer well during the snow season, was conducted from the last week of April until the beginning of July.

As explained earlier, the object of the baseline survey cycle was to compile complete property records, consisting of one or more interviews or field reports from each of the surveys. To avoid wasting resources on properties for which a complete record was not in prospect, a complex field scheduling plan was devised. For rental properties, landlord interviews were attempted first, and tenant interview assignments were usually issued only after a completed landlord questionnaire was returned to the field office. Residential building reports were ordinarily assigned only after the landlord and at least one tenant interview were completed; or for ownership properties, after the homeowner had been successfully interviewed. Deviations from these general procedures were planned for a variety of special cases, such as housing units and buildings included in the Urban Institute's comparability panel.

[8] After much labor, the Site I records for all three classes of respondents were integrated into a single master file whose records are parallel in structure.

Overall, the survey agenda implied about 11,000 field assignments, which were expected to result in about 8,200 completed questionnaires or field reports.

Tables 3.2, 3.3, and 3.4 summarize the results of the surveys of landlords, tenants, and homeowners respectively. No table is included for the survey of residential buildings because, being limited to observation by the fieldworker, it presents few nonresponse problems.

The sample list for the survey of landlords included 3,528 properties, of which 602 turned out to be either owner-occupied single-family homes or were otherwise inappropriate for interviewing.[9] Out of 2,926 interview attempts, 1,914 resulted in field-complete questionnaires, for a field completion rate of 65 percent. As anticipated from the results of the screening survey, this rate was well below the corresponding figure in Site I (72 percent). There was little difference between sites in the incidence of contact failure. The problem in Site II was predominantly refusals by landlords who were contacted; only 72 percent were willing to be interviewed, vs. 79 percent in Site I.

The sample list for the survey of tenants consisted of 5,803 housing units, of which 1,440 were retired because their landlords did not complete an interview, 603 were retired because either the housing unit or its occupants were not appropriately included in the sample,[10] and 512 were vacant. Out of 3,246 interview attempts, 2,214 were successful, for a field completion rate of 68 percent. (The comparable figure in Site I was 77 percent.) Of those contacted, 79 percent were willing to be interviewed, as compared with 88 percent in Site I.

The sample list for the survey of homeowners consisted of 1,415 housing units, including 609 reclassified in the field as owner-occupied. Except for the fact that there were relatively few vacancies, this was the least successful of the surveys. Out of 1,105 interview attempts, only 697 completed questionnaires were obtained, for a field completion rate of 63 percent. (The comparable figure in Site I was 72 percent.) The refusal rate among those contacted was especially high; only 69 percent agreed to be interviewed, as compared with 80 percent in Site I.

As noted in connection with the screening survey, the relatively low completion rates in Site II do not seem to reflect adversely on the survey subcontractor or the fieldworkers. Rather, it seems to be attributable to a less hospitable environment for survey research in St. Joseph County than we found in Brown County.

After completing the major baseline surveys whose results are reviewed above, the Survey Group planned and Westat executed two additional field tasks.

One was the field verification of land use on a sample of 543 properties that were carried on the real estate tax rolls as nonresidential. The purpose of this exercise, conducted during the month of August, was to validate baseline sampling procedures, which relied on tax record information in the early stages of sampling to determine which were residential properties. We expect this check to show that a small proportion of all "nonresidential" properties actually have housing units on them, and we will use the findings to adjust sampling weights in our analysis of survey data.

[9] Total of "Inappropriate" and "RMS error" in Table 3.2.

[10] Total of "Not attempted" and "RMS error" in Table 3.3. These include cases in which the sampled unit was occupied by a resident landlord, was not a rental unit, or had been removed from the housing market.

Table 3.2

Final Status of Landlord Survey Records: Site II, Baseline

Prebaseline Stratum		Interview Attempts, by Final Status				Not Attempted, by Reason				Summary Statistics		
Stratum Number	Property Description	Field Complete	Refusal	No Contact	Total	Inappropriate[a]	RMS Error[b]	Total	Total Sample	Sample Completion Rate[c]	Field Completion Rate[d]	Field Response Rate[e]
	Urban Rental	1,664	623	226	2,513	388	28	416	2,929	.57	.66	.73
	Single-family	936	339	161	1,436	322	24	346	1,782	.53	.65	.73
1	Low rent[f]	404	150	87	641	247	10	257	898	.45	.63	.73
4	Medium rent	291	100	42	433	43	7	50	483	.60	.67	.74
7	High rent	241	89	32	362	32	7	39	401	.60	.67	.73
	2-4 units	584	243	57	884	47	2	49	933	.63	.66	.71
2	Low rent	227	84	14	325	24	--	24	349	.65	.70	.73
5	Medium rent	304	135	33	472	20	2	22	494	.62	.64	.69
8	High rent	53	24	10	87	3	--	3	90	.59	.61	.69
	5+ units	144	41	8	193	19	2	21	214	.67	.75	.78
3	Low rent	78	22	6	106	12	2	14	120	.65	.74	.78
6	Medium rent	43	13	1	57	5	--	5	62	.69	.75	.77
9	High rent	23	6	1	30	2	--	2	32	.72	.77	.79
	Rural Rental	235	107	46	388	179	6	185	573	.41	.61	.69
10	Low or medium rent[f]	192	94	39	325	167	3	170	495	.39	.59	.67
11	High rent	43	13	7	63	12	3	15	78	.55	.68	.77
	Other Rental	15	7	3	25	1	--	1	26	.60	.63	.71
17	Rooming house	2	1	--	3	--	--	--	3	.67	.67	.67
18	Mobile home	12	5	2	19	1	--	1	20	.60	.63	.71
12-16	Other[g]	1	1	1	3	--	--	--	3	.33	.33	.50
	Total	1,914	737	275	2,926	568	34	602	3,528	.54	.65	.72

SOURCE: Tabulations by HASE staff of records in the unedited field reports file for the survey of landlords, Site II, baseline.

NOTE: Prior to panel selection, properties will be restratified to reflect information obtained from baseline surveys. Rent stratification is by terciles of the overall rent distribution for St. Joseph County.

[a] Includes 355 properties fielded as rental but found to be owner-occupied; and 213 properties that were otherwise unsuitable for inclusion in the baseline sample of rental properties.

[b] Duplicate, nonexistent, or unlocatable property.

[c] Field completions/total sample.

[d] Field completions/total interview attempts.

[e] Field completions/total contacts.

[f] Includes single-family homes whose tenure was uncertain at the time of stratification.

[g] Rental properties previously thought to be owner-occupied homes. Rescheduled for landlord interviews.

Table 3.3

Final Status of Tenant Survey Records: Site II, Baseline

Prebaseline Stratum		Interview Attempts, by Final Status				Not Attempted, by Reason					Still in Field	Total Sample	Summary Statistics		
Stratum Number	Property Description	Field Complete	Refusal	No Contact	Total	Vacant	Not Triggered[a]	Inappropriate[b]	RMS Error[c]	Total			Sample Completion Rate[d]	Field Completion Rate[e]	Field Response Rate[f]
	Urban Rental	1,993	514	389	2,896	479	1,197	410	92	2,178	2	5,076	.39	.69	.79
	Single-family	749	160	84	993	147	348	90	16	601	--	1,594	.47	.75	.82
1	Low rent[g]	289	75	45	409	78	175	76	13	342	--	751	.38	.71	.79
4	Medium rent	261	45	24	330	36	86	9	1	132	--	462	.56	.79	.85
7	High rent	199	40	15	254	33	87	5	2	127	--	381	.52	.78	.83
	2-4 units	788	187	135	1,110	212	582	257	12	1,063	--	2,173	.36	.71	.81
2	Low rent	303	70	65	438	82	192	109	8	391	--	829	.37	.69	.81
5	Medium rent	430	95	62	587	110	322	130	4	566	--	1,153	.37	.73	.82
8	High rent	55	22	8	85	20	68	18	--	106	--	191	.29	.65	.71
	5+ units	456	167	170	793	120	267	63	64	514	2	1,309	.35	.58	.73
3	Low rent	257	69	87	413	71	121	36	36	264	2	679	.38	.62	.79
6	Medium rent	134	54	61	249	20	75	25	20	140	--	389	.34	.54	.71
9	High rent	65	44	22	131	29	71	2	8	110	--	241	.27	.50	.60
	Rural Rental	182	44	49	275	24	186	81	11	302	--	577	.32	.66	.81
10	Low or medium rent[h]	148	38	46	232	22	165	66	9	262	--	494	.30	.64	.80
11	High rent	34	6	3	43	2	21	15	2	40	--	83	.41	.79	.85
	Other Rental	39	17	19	75	9	57	2	7	75	--	150	.26	.52	.70
17	Rooming house	3	3	2	8	4	4	1	--	9	--	17	.18	.38	.50
18	Mobile home[i]	33	14	17	64	5	53	--	7	65	--	129	.26	.52	.70
12-16	Other[j]	3	--	--	3	--	--	1	--	1	--	4	.75	1.00	1.00
	Total	2,214	575	457	3,246	512	1,440	493	110	2,555	2	5,803	.38	.68	.79

SOURCE: Tabulations by HASE staff of records in the unedited field reports file for the survey of tenants and homeowners, Site II, baseline.

NOTE: Entries include 1,099 interviews scheduled for households in the UI comparability sample, of which 908 were also in the HASE baseline sample of housing units. Prior to panel selection, properties will be restratified to reflect information obtained from baseline surveys. Rent stratification is by terciles of the overall rent distribution for St. Joseph County.

[a] A completed landlord interview was usually required to trigger interview attempts for tenants on a given property.

[b] Housing units that were found to be occupied by landlords or their agents, that had been withdrawn from the market, or that were otherwise unsuitable for inclusion in the baseline sample of rental housing units.

[c] Duplicate, nonexistent, or unlocatable housing unit.

[d] Field completions/total sample

[e] Field completions/total interview attempts.

[f] Field completions/total contacts.

[g] Includes single-family homes whose tenure was uncertain at the time of stratification.

[h] Occupant may own vehicle but rent its site.

[i] Renter-occupied units previously thought to be owner-occupied homes. Rescheduled for tenant interviews.

Table 3.4

Final Status of Homeowner Survey Records: Site II, Baseline

Prebaseline Stratum		Interview Attempts, by Final Status				Not Attempted, by Reason					Still in Field	Total Sample	Summary Statistics		
Stratum Number	Property Description	Field Complete	Refusal	No Contact	Total	Vacant	Not Triggered[a]	Inappropriate[b]	RMS Error[c]	Total			Sample Completion Rate[d]	Field Completion Rate[e]	Field Response Rate[f]
	Urban Owner	346	165	27	538	23	--	13	--	36	--	574	.60	.64	.68
12	Low value	113	53	10	176	11	--	1	--	12	--	188	.60	.64	.68
13	Medium value	157	76	12	245	12	--	4	--	16	--	261	.60	.64	.67
14	High value	76	36	5	117	--	--	8	--	8	--	125	.61	.65	.68
	Rural Owner	136	70	12	218	8	--	5	--	13	--	231	.59	.62	.66
15	Low or medium value	82	40	5	127	6	--	3	--	9	--	136	.60	.65	.67
16	High value	54	30	7	91	2	--	2	--	4	--	95	.57	.59	.64
	Other Owner	215	82	52	349	29	182	30	7	248	13	610	.35	.62	.72
18	Mobile home[g]	1	--	--	1	--	--	--	--	--	--	1	1.00	1.00	1.00
1-11	Other[h]	214	82	52	348	29	182	30	7	248	13	609	.35	.61	.72
	Total	697	317	91	1,105	60	182	48	7	297	13	1,415	.49	.63	.69

SOURCE: Tabulations by HASE staff of records in the unedited field reports file for the survey of tenants and homeowners, Site II, baseline.

NOTE: Prior to panel selection, properties will be restratified to reflect information obtained from baseline surveys. Value stratification is by quartiles of the overall value distribution for ownership properties in St. Joseph County.

[a] Occupants of these housing units were to be interviewed only if they were renters.

[b] Housing units that had been withdrawn from the market or were otherwise unsuitable for inclusion in the baseline sample of ownership properties.

[c] Duplicate, nonexistent, or unlocatable housing unit.

[d] Field completions/total sample.

[e] Field completions/total interview attempts.

[f] Field completions/total contacts.

[g] Occupant owns both vehicle and its site.

[h] Owner-occupied homes previously thought to be rental units. Rescheduled for homeowner interviews.

The other task was a review of the real estate tax records for the 4,333 residential properties in the baseline sample, begun in September. The purpose of this exercise was to abstract information about these properties that was needed for research purposes and was more readily obtained from these public records than from the property owners.

Preparing for the Second Wave of Surveys

Planning for the second survey cycle in Site II began in July, with revision of the survey instrument for tenants and homeowners, to be followed later by revision of the survey instrument for landlords.

Before the baseline surveys in Site II began, all instruments used in Site I had been reviewed and adapted to the special circumstances in Site II. At the same time, three separate instruments—one for tenants and homeowners, one for lodgers, and one for occupants of mobile homes—were combined into a single instrument with special modules for each of the four classes of respondents. In the postbaseline revision cycle, which began in the summer of 1975, instruments are being standardized further, with identical contents and format for Site II, Wave 2, and Site I, Wave 3. This standardization requires additional questions, codes, and skip patterns to handle site-specific issues, but is expected to yield substantial savings in instrument production, preparation of training materials, survey data preparation, and codebook production.

Near the end of September, Westat began Wave 2 fieldwork by relisting housing-unit addresses on 600 properties among those eligible for inclusion in the permanent panel. Other small tasks were scheduled for the remainder of 1975; major fieldwork was to begin with the survey of tenants and homeowners in January 1976.

Processing Baseline Field Reports

As interview questionnaires and other field reports were completed on site, they were batched weekly by Westat and shipped to Santa Monica for processing by HASE's Survey Data Preparation Group (SDPG).[11] Shipments began in December 1974 and continued until the late summer of 1975. By the end of August, virtually all completed questionnaires from the baseline surveys of landlords, tenants, homeowners, residential buildings, and neighborhoods[12] had been delivered by Westat, together with a variety of related field documents such as refusal, vacancy, and validation reports. Altogether, SDPG received 19,759 completed questionnaires and 29,347 other documents to code, keypunch, and clean.

Priority was given to the surveys of landlords, tenants, and homeowners. SDPG finished work on the first, the survey of landlords, on 31 August, delivering an edited field reports file of 1,922 records to the Data Systems Group for reformatting and interdocument accountability. Within a week, it was ready for audit and analysis. The edited field reports file for the survey of tenants and homeowners was next in line, and was delivered on 23 October, three weeks after the close of the period covered by this report. The edited field reports file for the survey of neighborhoods

[11] Processing procedures are summarized in Sec. II, pp. 31-32.

[12] In the case of the survey of neighborhoods, street segment observation reports had been delivered but "local sources" forms had not yet been fielded. The latter are forms for abstracting neighborhood data from public records, maps, etc., one for each of 86 designated neighborhoods.

was expected to be complete early in November. The corresponding file for the survey of residential buildings is scheduled for completion early in December.

The benefits of experience with the baseline surveys for Site I are especially conspicuous in survey data preparation. Problems encountered in cleaning those surveys led to revisions in the instruments that eliminated a number of field errors; and SDPG revised its cleaning specifications for each instrument to avoid some false error messages and to trigger messages for other errors that had been discovered in the Site I data only at a later stage, in DAG's audit of each file. Strict modularization of the instrument for the survey of tenants and homeowners enabled each module to be cleaned separately, with intermodule consistency checks as a final step.

Excluding the "local sources" forms for the surveys of neighborhoods in each site, the data preparation workload for Site II baseline surveys consisted of 19,759 completed questionnaires, vs. 20,978 in Site I. But instrument revision had increased the number of response fields in every instrument, so that for Site II there were 11.0 million response fields to be checked, vs. 10.7 million for Site I.

These are nearly equivalent workloads. However, the elapsed time from the first receipt of field reports to the compilation of the edited field reports file was reduced in Site II by about a month for the survey of landlords and by three months for the survey of tenants and homeowners. The number of error messages per questionnaire generated during the cleaning process dropped in Site II by 13 percent for the survey of landlords, but rose by 20 percent for the survey of tenants and homeowners, due primarily to problems with intermodule consistency checks.

Selecting the Permanent Panel of Residential Properties

Concurrently with survey data preparation, an intergroup sample selection team (DAG, DSG, SG) began accounting for the survey records received by SDPG and abstracting certain data from them. This exercise had two purposes: to identify properties for which complete baseline records were available and to determine the permanent panel sampling stratum to which each such property should be assigned. These tasks were still in progress at the close of the period covered by this report, but their completion and the selection of the panel was scheduled for late November 1975.

As noted above, completion rates for the separate surveys were lower in Site II than in Site I, but this had been anticipated and was taken into account in fixing the size of the baseline sample list. Although in some strata it is likely that the number of properties with complete baseline records will be inadequate to meet panel design targets, we do not currently expect to encounter critical shortages except in the case of rooming houses (which appear to be rare in St. Joseph County) and possibly mobile home parks. We may, however, find it necessary to lower our standards for record completeness.

Master-file Preparation, Survey Audit and Analysis

As this reporting period drew to its close, DAG, DSG, and SG were jointly planning file preparation, codebook compilation, and audit activities for the baseline surveys from Site II.

Experience with the baseline files from Site I was reviewed during the spring and summer of 1975 and led to major changes in file management and audit proce-

dures and to the development of software to support the new procedures. The general outlines of the system that has evolved are described in Sec. II. Here, we note that many of the new methods and machine programs will be applied for the first time to the Site II files as they are received from SDPG.

Only one Site II file—the screening survey conducted in July and August of 1974—has been available for audit and analysis for any length of time. The audit has moved slowly because it was given a low priority during 1975; but by the end of September, it was essentially complete, although the report was only in early stages of draft.

The screening survey had limited purposes. Its role in baseline sample selection has already been described. In addition, it provided data needed to plan the housing allowance program in Site II. DAG began analysis of the file as soon as it was released by SDPG, in October 1974, and reported the findings that bore on the allowance program in February 1975.[13]

HAO Administrative Records

During the period covered here, the HAO in Site II implemented its machine records system, following the Site I model and using the same processing software. Administrative files are batched quarterly and delivered to Rand. As in Site I, we plan once a year to integrate the HAO's six administrative files into two research files to be used in program analysis.[14]

The first research files, to be created early in 1976, will contain all records for the allowance program's first year of operation, from December 1974 through December 1975, a period that includes only nine months of open enrollment. Because enrollment has proceeded more rapidly in Site II than in Site I, the number of client records in this file will be at least as large as the number in the Site I file discussed in Sec. IV, despite the shorter period of open enrollment.

Summary and Prospects

During the year covered by this report—October 1974 through September 1975—a baseline sample of residential properties was selected in Site II, baseline field surveys were conducted, and most of the field reports were coded, keypunched, and cleaned. At the close of the period, survey records were under review to determine which properties were eligible for inclusion in the permanent panel, and work had begun on the compilation and audit of a master file for the survey of landlords.

Experience with corresponding tasks in Site I enabled Rand and its survey subcontractor to complete these tasks for Site II in a shorter time and with less strain. However, the environment for survey fieldwork was less hospitable in Site II, resulting in fewer completed interviews with landlords, tenants, and homeowners than we had hoped for. Early warnings from the results of the screening survey enabled us to plan larger baseline sample sizes to offset expected lower completion rates. At this point, it is clear that, although we may have difficulty filling some strata of the permanent panel of residential properties, the shortfalls will not in

[13] Ira S. Lowry, Barbara M. Woodfill, and Marsha A. Dade, *Program Standards for Site II*, The Rand Corporation, WN-8974-HUD, February 1975.

[14] See Sec. II, p. 34-35.

themselves be so serious as to cripple the research effort. However, it is clear that special attention must be given to the possibility of nonresponse biases that, if not corrected analytically, could lead to erroneous inferences from the survey data.[15]

During the coming year, Site II research activities will follow two tracks. One is the audit and analysis of baseline survey data and administrative records of the HAO. The other is conducting the second wave of field surveys.

The audit and analysis will benefit greatly from experience in Site I with file processing and analytical methods, and also from the availability of comparable data from Site I that will enrich the interpretation of Site II data. Reports on the Site II baseline and HAO data are scheduled for completion during the first half of 1976.

The second wave of survey fieldwork is scheduled to begin in January 1976 and run through midsummer. By the end of September 1976, nearly all survey files from Wave 2 should be coded, keypunched, cleaned, and ready for audit and analysis.

[15] See C. Peter Rydell and Richard E. Stanton, *A Plan for Analyzing Nonresponse Bias: Survey of Landlords, Baseline, Site I,* The Rand Corporation, WN-9211-HUD, August 1975.

IV. PRELIMINARY FINDINGS: BROWN COUNTY, WISCONSIN

As of October 1975, the experimental allowance program had been in operation in Brown County for fifteen months and two waves of survey fieldwork had been completed there. The baseline surveys were completed in June 1974, just before the Brown County HAO began open enrollment; second-wave surveys were completed in June 1975, at the end of the allowance program's first year.

As this report is being written, we have nearly completed our analysis of baseline survey data and of HAO records for the first year of program operations. Records from the second wave of surveys are only now emerging from the preanalysis processing necessary to convert the lengthy questionnaires to a machine-readable data base.

The findings reported here are consequently drawn from baseline survey data and from HAO data for the first year of program operations. We are able to describe in some detail the characteristics of Brown County's housing market just before the program began, from the perspectives of both suppliers and demanders of housing services. We are also able to report on the characteristics of the first 3,000 households enrolled in the program and on their experiences in obtaining housing that meets program standards.

MAJOR FINDINGS

Brown County was selected as a site for the Supply Experiment because its housing market appeared to be representative of many markets in which a national allowance program would operate but which have received little attention in previous planning of federal assistance programs. For Site I, we sought a metropolitan area whose central city was increasing in population and one where racial minorities formed at most a small fraction of the central-city population.

Associated with these characteristics, we expected to find a persistently "tight" housing market whose operations were free of the complications introduced by racial or ethnic antagonisms; a housing inventory that was in relatively good condition overall, the deteriorating units being scattered rather than concentrated in blighted neighborhoods; and rents and home prices that readily responded to changes in supply costs because growing local demand supported the market.

Communities of this type are seldom featured in the news or in public discussions of urban problems. Yet as of the 1970 census, they comprised more than a fourth of all metropolitan areas in the nation and accounted for nearly 15 percent of the total metropolitan population.[1] By testing the experimental allowance program in such a market as well as under the more complex conditions of Site II, we believe that we will learn much about the influence of local conditions on program outcomes and about the national relevance of the housing allowance concept.

[1] See Housing Assistance Supply Experiment Staff, *Site Selection for the Housing Assistance Supply Experiment: Stage I*, The Rand Corporation, WN-7833-HUD, May 1972.

The Rental Housing Market in 1973

Our analysis of baseline data for Brown County has focused on the structure and operating characteristics of the rental housing market, viewed from both supply and demand perspectives. Our findings confirm that the market has the characteristics we sought, and these are reflected clearly in the development of the experimental allowance program there. Our information on operating characteristics includes some surprising data that, if generally true of other markets of this type, should reshape our thinking about them. Some key points are summarized below.

- *The county's 6,846 rental properties had about 16,200 housing units on them. Less than a fourth of these units were in large multiple dwellings and only 15 percent were single-family homes. Well over half were on properties with two to four units. Rental properties, including mobile home parks and rooming houses, account for roughly a third of the stock, the remainder being owner-occupied single-family houses.*
- *Nearly all rental real estate in Brown County is owned and managed as a sideline by nonprofessional investors. The typical landlord is the owner of a small multiunit property on which he lives, caring for the property after work or on weekends. Only 13 landlords own more than ten properties, and only large apartment buildings, mobile home parks, and a few rooming houses seem to be professionally developed and managed.*
- *Only large multiunit properties rely much on mortgage financing. Nearly half of all rental properties are unencumbered by any kind of debt; for those that are mortgaged, the debt usually accounts for no more than half the property's market value.*
- *The rental vacancy rate has been low by national standards at least since 1970. During the winter of 1973-74, when our surveys were conducted, the rate for regular rental properties was about 2.8 percent—a figure that may be compared with 6.4 percent for the Midwest and 6.2 percent nationally. The average annual vacancy rate for 1973 was higher, about 5.1 percent, the difference from the winter rate reflecting seasonal variation in moving.*
- *Different configurations of vacancy rates, vacancy durations, and tenant turnover help to define rental submarkets in Brown County. Submarkets with the shortest vacancies tend to have newer buildings, higher rents, and housing of better quality. More of them require security deposits and leases and more have tenants with children. But the average duration of vacancies is not closely related either to the frequency of turnover or to the annual average vacancy rate.*
- *If all units on rental properties had been rented for all of 1973, the gross income from them would have amounted to $22.6 million, about 11 percent of their total market value. Because some units were owner-occupied and others were occupied by friends, relatives, or employees who paid less than the market rent, about 16 percent of potential gross income was not realized in cash. Another 7 percent was lost owing to vacancies and bad debts. Cash receipts thus amounted to $17.4 million.*
- *Total operating expenses amounted to $14.7 million, of which 28 percent was real estate taxes and 39 percent was accounted for by unpaid labor performed by owners and their families. However, debt service and the cost*

of amortizable improvements, when added to operating expenses, result overall in a small negative cash flow. Only large multiunit properties reported a positive cash flow for 1973.

- *We estimate that the net rate of return on the market value of rental property (not its acquisition cost) was only 2.4 percent in 1973, and even for the most profitable class of properties was only 5.3 percent. These estimates take into account both the cash and noncash elements of income and operating expenses. Investments in rental property thus appear competitive with alternatives only if the investor expects capital gains from rising property values at the rate of 5 to 10 percent annually.*

Household Life Cycle and Housing Consumption

When households are classified by life-cycle stage (based on the ages and marital status of the household heads and the number and ages of any children) rather than simply by size or income, the relationships between their housing needs or preferences and their financial resources are much clarified. Households are usually formed by young single persons or newly married couples, then grow as children are born. Some years later, they begin to shrink as the children mature and leave home, and again when one parent dies. Concurrent with these changes in household size and composition, there are changes in household labor-force participation, income, and housing preferences.

- *In Brown County, nearly all single persons and young couples start out as renters. Income tends to drop when the wife leaves the labor force to have her first child, a point at which more ample accommodations are usually needed and homeownership is first contemplated.*
- *Thereafter, income and family size tend to increase together, both peaking when the male head is between 45 and 60 years old. Typically, a household in this stage has five or six members, two of whom are employed; median income is about $17,500. By then, 95 percent of all households are homeowners and most of the rest live in rented single-family houses.*
- *As children grow up and leave home and as parents retire from the labor force, both income and family size drop sharply. The parents—especially those who are widowed—often sell their homes and move into rented apartments. Only 45 percent of the single persons over 60 own their homes.*
- *Life-cycle adjustments in housing consumption are mostly achieved by moving from one housing unit to another. In Brown County, the majority of such moves are made by young single persons or childless couples, who move from one rented apartment to another. Their last moves for many years usually occur when they buy homes. More than 68 percent of the young single persons move each year, but the rate drops to one percent for those at the peak of the household life cycle. For elderly single persons, the rate rises again to 9 percent.*
- *Reasons for moving differ over the life cycle. For those in early stages, setting up a household separate from parents and getting married are the major reasons for seeking a different place to live. Later moves are prompted by decisions to buy homes and by the need for more space to accommodate growing families. As children mature and leave home, their parents begin*

to move to more convenient locations or seek better neighborhoods. Elderly widows and widowers often move involuntarily, because they are either physically or financially unable to maintain their former homes.

The First Year of Housing Allowances

Analysis of administrative records of the Brown County Housing Allowance Office for the first year of program operations enables us to characterize those who have enrolled in the program and to describe their experiences with it.

- *Eighty percent of those who have enrolled are either elderly single persons, single adults with children, or young couples with young children. Our survey data indicate that these are the largest groups of low-income households in the county, and over 40 percent of the eligibles in each group have enrolled. Many older couples with no children living at home are also eligible, but few have enrolled. Overall, a third of the enrolled households are headed by elderly persons (62 years or over).*
- *The usual assumption that poverty implies rental tenure is incorrect for Brown County. Even though the HAO includes as part of income an amount equal to 5 percent of a homeowner's equity in his property, we estimate that there are more eligible homeowners than renters. However, renters predominate among those who have enrolled, accounting for 60 percent of the total. About half of the eligible homeowners and a third of the eligible renters are elderly.*
- *Among those eligible, the program is more attractive to households with lower incomes and larger allowance entitlements. Even so, the median allowance payment is under $60 monthly, much less than the typical transfer under other federal housing assistance programs. The allowance payment usually covers less than half of the recipient's total housing expenses.*
- *For most recipients, the payment has replaced prior housing expenditures from nonallowance income, rather than leading to increased spending for better housing. This has been possible because they already lived in housing that met program standards, but their preenrollment housing expenditures exceeded a fourth of their incomes. The allowance, in other words, has enabled them to maintain an adequate standard of housing consumption with less strain on their budgets for other goods and services.*
- *About a fourth of all those enrolled have caused their preenrollment units to be repaired or improved so that they can qualify for allowance payments. These include about 400 renters and 435 homeowners. Most of their units had only minor defects, such as missing handrails, faulty windows, or unsafe heating vents. But there have been some cases in which major repairs or improvements were made by a landlord or homeowner pursuant to program requirements.*
- *Few of those enrolled during the first year had moved from their preenrollment units by the year's end. The movers were nearly all renters, and about three-fourths of them moved from preenrollment units that failed their initial evaluations. Most of the movers paid considerably higher rents in their new units than in their old ones, presumably because the new units were either larger or of better quality.*

- *Rents paid by nonmovers have been remarkably stable. Despite a tight housing market and considerable background inflation, landlords have rarely raised their rents in response to the knowledge that their tenants were receiving housing allowances, even when they were asked to make repairs needed for certifiability. There have been a few cases in which a tenant's request for a year's lease prompted a small rent increase, not unreasonable in an inflationary economy.*
- *Moves by program participants have been too few to disturb either the neighborhoods of origin or those of destination. During the first year, only 229 enrollees moved from their preenrollment units and only 128 moved from their preenrollment neighborhoods. The high incidence of program participants whose preenrollment units were certified either before or after being repaired suggests that the program in Brown County is unlikely to result in neighborhood turnover. Instead, by enabling homeowners and renters to stay where they are and to maintain their homes adequately, the program is more likely to stabilize neighborhoods.*
- *Although the experimental housing allowance program enrolled over 3,000 households in its first year, its effects on the local housing market have hardly been visible. Given the common concern among housing experts that a fullscale allowance program might set in motion a variety of adverse market consequences—rent inflation, speculation in real estate, neighborhood turnover, home improvement frauds—this is an extremely important if necessarily tentative finding.*

Below, we report in more detail on the rental housing market, the household life cycle and housing consumption, and the allowance program, explaining the statistical basis and technical qualifications for the findings summarized above.

THE RENTAL HOUSING MARKET AT BASELINE

From data gathered in the baseline survey of landlords, we estimate that there were 6,846 rental properties in Brown County at the end of 1973. These properties had about 16,200 housing units on them, roughly a third of all housing units in the county. The remainder of the housing stock consisted of owner-occupied single-family homes.

Table 4.1 shows the distribution of rental properties by type of property and the numbers of housing units on each type. "Regular" properties are those that are primarily residential and whose housing units are fixed in place. They are divided here by size of property and, in the case of single-unit properties, by urban or rural location. Nearly all the multiunit properties are in the urban part of the county. Nearly two-thirds of the regular properties are small multiple dwellings, and these account for about the same proportion of housing units. Properties with five or more units average 12 units per property, and very few of them have more than 50 units.

Because they present special analytical issues, the table separately lists three types of "nonregular" rental properties. The most important of these are mobile home properties, which include 13 large mobile home parks and about 40 properties with one or two mobile homes on them but no conventional housing units. Generally, the occupants of the mobile homes own their vehicles but rent the space on which

Table 4.1

Distribution of Rental Properties and Housing Units, by Type of Property: Brown County, Wisconsin, 1973

Type of Property	Number of Properties	Number of Housing Units		
		Owner Occupied[a]	Rented or Vacant	Total
Regular				
5+ units	265	23	3,174	3,197
2-4 units	4,241	1,652	7,790	9,442
1 unit, urban	1,765	--	1,765	1,765
1 unit, rural[b]	266	16	259	275
Total regular	6,537	1,691	12,988	14,679
Nonregular				
Mobile home	53	862	75	937
Rooming house	47	10	343	353
Farm	209	64	206	270
Total nonregular	309	936	624	1,560
Total	6,846	2,627	13,612	16,239

SOURCE: Tabulations by HASE staff of records of the survey of landlords, Site I, baseline.

[a]Units occupied by the landlord for all twelve months of 1973 (total of 1,739 units) and mobile homes occupied by owners who rent the mobile home space (total of 888 units, 858 of them on mobile home properties).

[b]Nine of these properties have a mobile home space for rent, in addition to the nonmobile home unit counted when determining property type. Seven of the nine properties have a resident landlord but are classified as rental rather than homeowner because of the rented mobile home space.

the vehicle is located. Rooming houses, as defined here, do not include private homes with fewer than five lodgers. Farms are sometimes occupied solely by a tenant who also works the land; others are occupied by their owners, who rent additional housing units to employees or others. Altogether, these three special types account for less than 5 percent of all rental properties.

Although no two communities are exactly alike in these respects, the assortment of rental properties in Brown County is typical of most metropolitan areas with populations of under 250,000 in the predominance of small multiunit properties and in the small but growing role of mobile home parks. It is also typical in having many resident landlords (25 percent of the properties) and a good many tenants who are related to their landlords (13 percent of the properties have one or more units occupied by such tenants).

Although the larger apartment houses were built as such, many rental properties in Brown County have evolved from owner-occupied single-family homes. A third of all rental properties have been altered since their initial development in ways that change the number of units on them. Forty percent of all properties that now have two to four units began life as single-family houses; and 41 percent of all single-unit rental properties were built or purchased by their current owners as personal residences. We are unable to trace the original uses of single-family houses that changed hands after they were built, but the odds are that nearly all were at

first owner-occupied. (A corollary of these development histories, to which we will return later, is that few landlords are primarily professional investors or managers.)

Characteristics of Landlords

From our sample survey, we estimate that there were about 5,045 owners of rental residential property in Brown County. Table 4.2 gives details of their holdings. Nearly 83 percent held a single property whose average size was 2.3 housing units. Nearly 98 percent held four or fewer properties, and only 13 landlords owned more than ten properties. Clearly, ownership of rental real estate in Brown County is diffuse.

Table 4.2

Distributions of Landlords, Properties, and Housing Units, by Size of Holding: Brown County, Wisconsin, 1973

Properties per Landlord	Number of Landlords		Number of Properties		Number of Housing Units	
	Number	Percent	Number	Percent	Number	Percent
1	4,170	82.6	4,170	60.9	9,404	57.9
2	519	10.3	1,038	15.2	2,135	13.1
3	174	3.4	522	7.6	1,310	8.1
4	64	1.3	256	3.7	595	3.7
5	46	0.9	230	3.4	565	3.5
6	22	0.4	132	1.9	370	2.3
7	23	0.5	161	2.4	443	2.7
8	8	0.2	64	0.9	308	1.9
9	3	0.1	27	0.4	172	1.1
10	3	0.1	30	0.4	51	0.3
Over 10	13	0.3	216	3.2	886	5.4
Total	5,045	100.0	6,846	100.0	16,239	100.0

SOURCE: Tabulations by HASE staff of records of the survey of landlords, Site I, baseline.

Nearly all owners of record were single proprietorships (93 percent). The remainder were partnerships (4 percent), corporations (3 percent), or trusts (one percent). Even the larger multiunit properties were most often held by single proprietors (78 percent) or partnerships (16 percent), rather than corporations (4 percent).

Corporations aside, nearly 98 percent of Brown County's landlords have other sources of income than their real estate holdings. Half the landlords worked at another occupation, usually a fulltime job. Investments other than real estate brought in additional income for 36 percent of the landlords, and 29 percent drew pensions or social security.

For most of these landlords, real estate holdings were a distinctly minor source of income. Seventy-three percent reported that they obtained no more than 10

percent of their current income from their real estate holdings. It is especially interesting that a third of all landlords claimed that their real estate holdings did not yield *any* current income. (As we shall see, this claim is generally substantiated by the detailed income and expense information they gave us for properties in the sample.)

Nearly 42 percent of the landlords told us they originally acquired their rental properties as residences, and 63 percent either once lived on their property or live there now. They generally manage the properties themselves, with occasional help from an accountant or lawyer. Less than 8 percent of all landlords had any regular employees working on their rental properties.

To sum up, nearly all rental real estate in Brown County is owned and managed as a sideline by nonprofessional investors. Only the largest properties—large apartment buildings and mobile home parks and a few rooming houses—seem to be professionally developed and managed. The typical landlord is the owner of a small multiunit property on which he lives, caring for the property after work or on weekends.

Relations with Tenants

Generally, dealings between landlords and tenants in Brown County appear to be relaxed and comfortable. Twenty-five percent of the rental properties had resident landlords and 13 percent had one or more tenants who were related to the landlord. Only about 10 percent of all landlords ordinarily required their tenants to sign lease or rental agreements, and most of the leases were for a year or less (e.g., month-to-month). A larger proportion of landlords—about 30 percent—required security or cleaning deposits, usually no more than $100. Only a third of all landlords customarily checked the credit records of prospective tenants or consulted their former landlords or employers.

In general, landlords thought well of their tenants, and evidence from the survey of tenants indicates that this goodwill was mutual. When asked to rate tenants' care for their units, 97 percent of the landlords termed it good or fair. At least as reported by landlords, tenant complaints were usually about other tenants, and related to noise, refuse disposal, pets, or the behavior of children. The landlords did report some complaints about maintenance, repairs, or heat, but very few reported complaints about rent.

Rental Properties as Investments

Most landlords in Brown County seemed to feel their properties had done well financially in recent years, and they also were optimistic about the future. Thirty-nine percent said their cash revenues had increased during the preceding three years and only 6 percent reported decreases. Two-thirds thought their current profits were adequate and nearly half expected profits to increase in the future; only 5 percent expected profits to decrease. Of those who were dissatisfied with their property's current yield, 52 percent expected better returns in the future.

Of those anticipating higher yields, 57 percent cited rising rents as the main reason. Yet only a fourth had raised rents on their properties during the preceding year, and only a fourth expected to raise them the following year. Nearly half of all landlords told us they neither had raised rents during the preceding year nor intend-

ed to increase them the following year. Given the tightness of the market and inflation in operating costs over the several years preceding the survey, these are to us surprising responses.

Landlords' general satisfaction with their current income extended as well to the marketable values of their properties. About 71 percent thought their properties had increased in value over the preceding three years, and 79 percent expected further increases in the following five years. Of those expecting increasing property values, half cited general inflation as the main cause and a fourth pointed to specific factors in the neighborhoods where their properties were located; less than 8 percent mentioned housing shortages.

These optimistic views do not necessarily conflict with the fact that 18 percent of the landlords were thinking of selling their properties. They usually gave one of four main reasons for wanting to dispose of their holdings: that the property was too much trouble to manage, that the capital was wanted for another purpose, that the property was not profitable, or that a good offer was expected or in hand.

Those not planning to sell were asked why they wished to retain the property. Their answers are shown in Table 4.3, by type of property. About a third of all landlords and nearly 46 percent of the owners of small multiunit properties explained that the property was their current or expected future residence. A fourth of all landlords and well over half the proprietors of mobile home parks and rooming houses named current income as the main reason for retaining their properties.

Table 4.3

Distribution of Landlords by Main Reason for Retaining Their Properties: Brown County, Wisconsin, 1973

Reason	Type of Property							
	5+ Units	2-4 Units	1 Unit, Urban	1 Unit, Rural	Mobile Home	Rooming House	Farm	All Types
Current income	27.8	22.8	35.3	15.4	54.7	57.6	11.1	25.4
Capital gains	17.0	12.2	10.8	11.0	13.7	0.0	4.9	11.6
Tax shelter	13.1	1.0	0.7	2.9	0.0	15.7	0.0	1.3
Retirement income	15.8	5.3	7.2	4.3	0.0	14.3	0.0	5.8
Starting a business	2.0	0.4	0.4	3.5	13.7	0.0	6.7	0.9
Building an estate	6.3	3.1	1.8	4.3	13.7	0.0	8.2	3.3
Financial security	3.8	4.6	4.5	7.8	0.0	5.2	6.2	4.8
Residence	7.2	45.5	16.1	13.0	0.0	0.0	20.8	34.5
Sentimental reasons	2.0	2.1	11.6	16.0	0.0	0.0	3.7	5.0
Other reasons	5.0	3.0	11.6	21.8	4.2	7.2	38.4	7.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

SOURCE: Tabulations by HASE staff of records of the survey of landlords, Site I, baseline.

NOTE: This question was skipped by 18.3 percent of all landlords who reported current plans to sell their properties. The main reason for retaining the property could not be determined in about one percent of all cases, and these are omitted from the percentage distributions shown in the table.

Capital gains also had a broad appeal, but tax sheltering was rarely mentioned except by landlords of large multiunit properties and proprietors of rooming houses. The speculative nature of mobile home parks is suggested by the fact that 27 percent of the proprietors of these properties saw them as a means of starting a business or building an estate.

Financing Rental Properties

The most striking feature of rental property finance in Brown County is its limited dependence on borrowed capital. Table 4.4 shows that nearly half of all rental properties were unencumbered by any kind of debt. Nearly two-thirds of all single-unit properties and farms were debt free; only the large muntiunit properties (5 units, mobile home parks, rooming houses) relied heavily on mortgage financing.

The principal reason for this pattern seems to be that most of these properties have been under the same ownership for a number of years, and mortgage debt has been retired. For properties that do have mortgages, the owner's equity is generally substantial, the debt usually accounting for about half the property's market value.

About 86 percent of the outstanding mortgage loans were made by established lending institutions such as banks, life insurance companies, and savings and loan associations. Although 53 firms participated in the market, eight of them held nearly 70 percent of the outstanding loans. Only 12 percent of all first mortgages carried either FHA insurance or VA guarantees. About 90 percent of the mortgages were of the conventional level-payment type, in which the full principal is amortized by equal monthly payments over the scheduled life of the loan, the payments comprising shifting shares of interest and principal as the loan is amortized.

Table 4.4

Distribution of Rental Properties, by Type of Financing: Brown County, Wisconsin, 1973

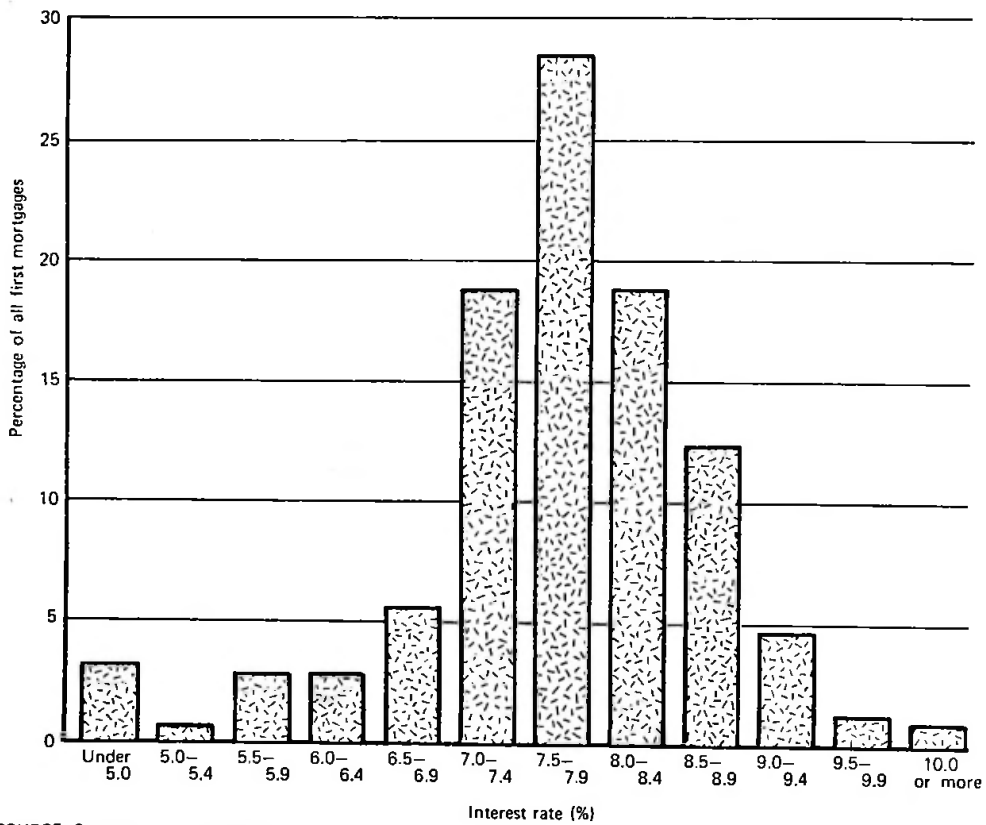
Type of Property	Percentage Distribution by Type of Financing					Owner's Equity (%) in Mortgaged Properties[a]
	None	Mortgage	Land Contract	Other	Total	
5+ units	12.4	85.7	1.9	--	100.0	39.6
2-4 units	43.1	52.9	3.6	.4	100.0	45.7
1 unit, urban	64.9	31.1	3.7	.3	100.0	53.3
1 unit, rural	63.9	32.7	3.4	--	100.0	65.8
Mobile home	32.8	67.2	--	--	100.0	46.5
Rooming house	27.7	59.5	12.8	--	100.0	42.1
Farm	66.0	24.9	9.1	--	100.0	77.0
All types	48.8	47.1	3.8	.3	100.0	47.1

SOURCE: Tabulations by HASE staff of records of the survey of landlords, Site I, baseline.

[a]Owner's estimate of market value minus the outstanding balance of all mortgage liens, expressed as a percentage of market value. The survey instrument did not inquire about outstanding balances on land contracts.

Less than 4 percent of all properties were being purchased under an installment plan known locally as a "land contract." This contract differs from a mortgage principally in that the seller retains title to the property until all or most of the purchase price has been paid; and in the meantime, the seller draws interest on the unpaid balance. As indicated in Table 4.4, land contracts were most commonly used in transactions involving rooming houses and farms.

Figure 4.1 shows the distribution of interest rates on first mortgages for all mortgaged rental properties. Some of these mortgages had been initiated ten to twenty years earlier, when interest rates were much lower than in 1973. However, it had long been the custom in Brown County to write mortgage contracts so that the interest rate can be changed periodically and unilaterally by the lender.[2] Consequently, rates on existing mortgages are seldom far below the 1973 rate on new loans, which was about 7.5 percent.



SOURCE: Survey of landlords, Site I, baseline

Fig. 4.1—Distribution of mortgaged rental properties, by mortgage interest rate: Brown County, Wisconsin, 1973

[2] The mortgage rates are not indexed—i.e., tied to some more general interest rate—but can be changed at the lender's discretion. If the borrower objects to the new rate, he has the theoretical option of obtaining cheaper financing elsewhere and paying off the old loan.

Vacancy Rates and Tenant Turnover

For some analytical purposes, we have defined the rental housing market to exclude properties that are vacant but not available for rent or whose tenants are all related to the landlord. On this basis, the market comprised 6,089 properties with 13,690 housing units that were either tenant-occupied or vacant but available for rent. Using this restricted definition of the market, we have calculated several measures of rental vacancy experience in Brown County during 1973. Table 4.5 summarizes our findings, by type of property.

The entries in the first column are "instantaneous" vacancy rates as they are usually calculated by the national census of housing and by local housing surveys: The number of units that were vacant at the time of the survey is divided by the total number of occupied and vacant units. By this measure, the vacancy rate for regular rental properties in Brown County was under 3 percent during the winter of 1973-74, when the baseline survey of landlords was conducted, a figure that may be compared with 6.4 percent for the Midwest and 6.2 percent nationally during the first quarter of 1974.[3] Thus, by the conventional measure, Brown County had a tighter-than-average rental market just prior to the commencement of the housing allowance program there.

The remaining columns offer different perspectives on vacancies in Brown County, perspectives that are not generally available for rental housing markets. The annual average vacancy rate is the percentage of rental units that were vacant on an *average* day in 1973, rather than on the particular day of the survey. It is higher than the corresponding instantaneious vacancy rate for each type of regular rental property, reflecting the fact that vacancies are more common in other seasons than in midwinter, when the survey was conducted. For regular rental properties, about 5 percent of all units are vacant on an average day.

Table 4.5

Vacancy and Turnover Statistics for Rental Housing Units, by Type of Property: Brown County, Wisconsin, 1973

Type of Property	Vacancy Rate (%)		Annual Turnover per 100 Units	Average Vacancy Duration (Weeks)
	Seasonal (Winter 1973-74)	Annual Average, 1973		
Regular				
5+ units	4.67	6.35	50.6	6.6
2-4 units	2.39	4.70	43.8	5.6
1 unit, urban	1.29	4.46	35.5	6.6
1 unit, rural	2.73	3.98	17.9	11.6
All regular	2.85	5.09	44.1	6.0
Nonregular				
Mobile home	6.81	9.29	10.1	48.0
Rooming house	24.82	18.31	83.4	11.4
Farm	2.47	2.30	28.5	4.2
All nonregular	10.94	10.96	29.6	19.2
All properties	3.66	5.64	42.6	6.9

SOURCE: Tabulations by HASE staff of records from the survey of landlords, Site I, baseline.

[3] U.S. Bureau of the Census, *Housing Vacancies*, Current Housing Reports, Series H-111-74-4, February 1974. We exclude the data for nonregular rental properties from this comparison because at least two-thirds of them are excluded from the Current Population Survey.

The third column of the table is perhaps the most surprising. It shows the frequency of tenant turnover, the event that produces vacancies. Despite only a 5-percent average annual vacancy rate, there were 44 moveouts per 100 regular rental housing units during 1973. Of course, some units had more than one change of tenant during the year, while others had none. But it is clear from these figures that a low vacancy rate is not a barrier to changes of residence—and also that an important part of a landlord's routine is settling accounts with departing tenants, preparing the vacant unit for reoccupancy, and finding new tenants.

When a tenant moves out, the vacancy may be filled quickly or slowly, depending on the demand for that type of housing and the effectiveness of the landlord's methods for seeking new tenants. The last column of the table shows the average duration of vacancies that occurred in each type of rental housing during 1973. For regular rental properties, the average vacancy lasted six weeks—a surprisingly long time given the conventional evidence of market "tightness" in Brown County. However, relatively few long vacancies would be required to raise the average above the median or mode, so the figure may be slightly misleading.

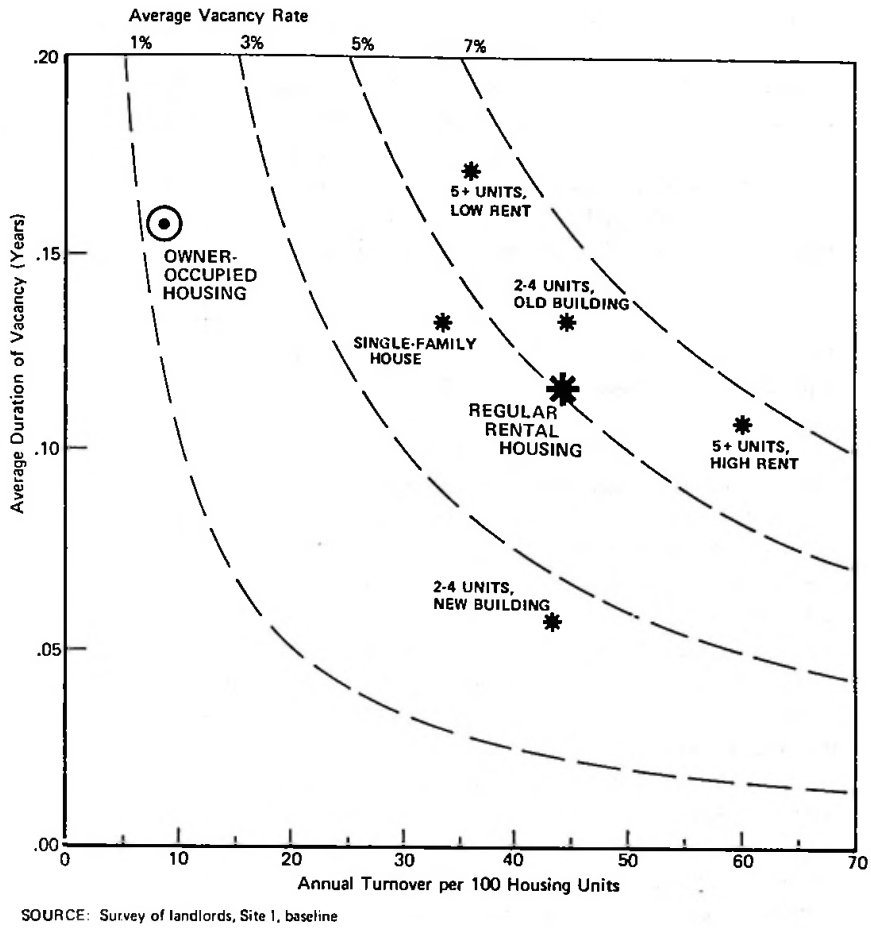
We view these vacancy and turnover statistics as a useful basis for distinguishing rental housing submarkets in Brown County—that is, types of rental properties within which landlords are in direct competition for tenants. Note in Table 4.5, for example, that a 2-percent annual average vacancy rate for rental units on farms coexists with an 18-percent rate for rooming-house units. Obviously, renters who want to live on farms do not usually think of rooming houses as an acceptable substitute. Less dramatic but more important (because more housing units are involved) are the differences in average annual vacancy rates between types of regular rental properties. However, note also that those types with the highest vacancy rates do not necessarily have the greatest turnover, nor are their vacancies the most difficult to fill once they occur.

We have examined turnover processes for regular rental properties in some detail, and are able to identify the five distinctive patterns that are displayed in Fig. 4.2. The figure shows all three dimensions of the process: average vacancy rates (dashed curves), average duration of vacancies (vertical axis), and annual turnover (horizontal axis). The plotted points are for types of properties whose vacancy and turnover patterns, considered jointly, are distinctive.

For instance, after dividing properties with five or more units into various groups, we found that turnover processes varied most by rent level. Low-rent and high-rent properties had about the same annual average vacancy rate, between 6.1 and 6.5 percent. However, for low-rent properties, this rate resulted from relatively infrequent turnovers (36 tenants per 100 units per year) and long-lasting vacancies (about nine weeks, on average). For the high-rent properties, annual turnover was 60 tenants per 100 units but the average vacancy lasted less than six weeks.

Annual turnover does not vary much among subgroups of small multiunit properties, but we found that vacancies lasted much longer for those whose buildings were over thirty years old than for those with new buildings.

In the upper lefthand corner of the figure, a point is plotted for owner-occupied housing in Brown County, based on data from the survey of homeowners. It is included here for contrast. Note that for homeowner properties, the annual average vacancy rate is about 1.3 percent, far below the corresponding figure of 5.1 percent for regular rental housing. For homeowner properties, the low vacancy rate reflects the rarity of turnover (8 per 100); once a property is vacant, however, the vacancy



SOURCE: Survey of landlords, Site 1, baseline

Fig. 4.2—Differences in housing turnover processes by submarket: regular rental housing, Brown County, Wisconsin, 1973

lasts an average of eight weeks. Regular rental housing has many more turnovers (44 per 100 units) but shorter vacancies (under six weeks).

Reaching firm conclusions about the structure of housing submarkets in Brown County will require additional research relating to matters other than vacancy and turnover. However, the patterns shown in Fig. 4.2 suggest to us that the regular rental housing market comprises at least five large submarkets (there are additional small ones), each serving a somewhat special population.

Submarkets with the shortest vacancies tend to have newer buildings, higher rents, and housing of better quality. More of them require security deposits and leases, and more have tenants with children. But the average duration of vacancies is not closely related either to the frequency of turnover or to the average annual vacancy rate. The latter is the figure that bears most directly on the landlord's losses due to vacancies, a subject discussed further below.

Rental Revenues and Expenses

From each landlord interviewed at baseline, we sought (and usually obtained) a detailed account of rental income and expenses related to the sample property.

Appropriately weighting each complete response, then adding across properties, we are able to construct a consolidated financial statement for all rental properties in Brown County. Such a statement for 1973 is shown in Table 4.6.

If all housing units and commercial space on rental properties in the county had been rented throughout the year to tenants who paid full market rents, the gross income from the properties would have amounted to $22.6 million, about 11 percent of the properties' total market value of $205 million.

However, the owners themselves occupied some units on these properties without explicit rent payments and waived all or part of the normal rents on other units occupied by friends, relatives, or employees. Thus, even though such a landlord presumably received equivalent benefits (or transferred them to friends or relatives), about 16 percent of the potential gross income from the properties was not realized in cash.

Another 7 percent of potential income was lost because of vacancies and nonpayment of rent. This is an expectable cost of doing business, but the vacancy loss rate especially varies with market conditions. In 1973, it was 5 percent for residential vacancies, a figure that reflects the average vacancy rate for 1973, reported earlier. Losses due to nonpayment of residential rent were less than one percent.

On the expense side of the ledger, Brown County's landlords paid out nearly $9.0 million in cash to operate these properties; however, many of them—especially the resident landlords—also worked on the properties or in their management without drawing explicit salaries. The value of unpaid labor done by owners, their families, and their friends was estimated by the respondents[4] at $5.8 million; this figure does not include rent waivers to employees, the value of which is counted here under "wages and salaries."

The extent of self-employment in the operation of rental properties is not surprising, considering that 95 percent of these properties have fewer than five units and 25 percent have resident landlords. However, it is important in any appraisal of the profitability of investments in rental real estate to note that nearly 40 percent of all operating expenses are not cash payments. Moreover, a property may be held not so much because it provides a competitive return as an investment but because it provides an opportunity for congenial self-employment, one that is usually consistent either with holding another fulltime job or with retirement. In the latter case, for instance, the imputed value of the labor does not count against social security entitlement, inasmuch as it shows up on the tax form as a return to assets, not earnings from employment.

The other large items in the expense statement are real estate taxes ($4.2 million) and fuel and utilities ($2.1 million). Taxes amounted to about 2 percent of the owner's estimate of property value, 18 percent of potential gross income, and 28 percent of all operating expenses. The fuel and utilities expenses reported here are for all of 1973, thus mostly preceding the major price increases of the winter of 1973-74. They do not include fuel and utility bills paid directly by the tenants of the properties.

Finally, we note that $1.0 million was spent for repairs, less than 7 percent of

[4] Respondents were asked how many hours of work were done per week during 1973 and also how much it would have cost to hire someone to do the work. The average implicit wage was $4 per hour, a figure we used to impute the value of unpaid labor when only hours were reported.

Table 4.6

Consolidated Financial Statement for 6,846 Rental Properties: Brown County, Wisconsin, 1973

Income Item	Annual Amount ($000)	Percentage Distribution	Expense Item	Annual Amount ($000)	Percentage Distribution	Performance Measures	Amount ($000) or Rate (%)
Cash Receipts and Waivers			*Operating Expenses*			*Net Income and Cash Flow*	
Residential rent	16,738	74.2	Real estate taxes	4,176	28.3	Net cash income[f]	8,464
Services to tenants	51	.2	Insurance premiums	596	4.0	Net operating income[g]	6,321
Commercial rent & services	616	2.7	Professional services	178	1.2	Debt service[h]	8,496
Total cash receipts	17,405	77.1	Office expenses	164	1.1	Amortizable improvements	2,903
Residential rent waived[a]	3,649	16.1	Fuel and utilities	2,102	14.3	Pretax cash flow[i]	(2,935)
Total cash and waivers	21,054	93.2	Wages and salaries[c]	438	3.0	• Cash flow rate (%)[j]	(13.0)
Potential Income Lost			Contract building services	82	.6	*Return on Capital*	
Residential vacancy loss	1,102	4.9	Maintenance supplies	205	1.4	Net operating income[g]	6,321
Uncollectible residential rent	164	.7	Repairs--labor & materials[d]	1,000	6.8	Depreciation allowance[k]	1,417
Commercial rent loss	267	1.2	Total cash expenses	8,941	60.7	Net return to capital[l]	4,904
Total income lost	1,533	6.8	Value of unpaid labor[e]	5,792	39.3	Estimated market value[m]	205,149
Potential Gross Income			Total operating expenses	14,733	100.0	• Gross rate of return (%)[n]	3.1
Total cash and waivers	21,054	93.2				• Net rate of return (%)[o]	2.4
Total income lost	1,533	6.8					
Potential gross income[b]	22,587	100.0					

SOURCE: Tabulations by HASE staff of records from the survey of landlords, Site I, baseline.

NOTE: Income and expense entries are estimates for all rental properties, based on a sample of 1,892 records containing all responses needed for complete accounts. Cash-flow and return-on-capital entries are based on smaller samples of 1,831 and 1,715 records, respectively, but are adjusted to make them comparable with income and expense entries. Negative entries are enclosed in parentheses.

[a] Includes imputed rents for units occupied by resident landlords, rent waivers to relatives or friends, and rent waivers to employees or to tenants in return for services rendered.

[b] Assumes all units rented for full year at full market rent, and all rent paid when due.

[c] Includes cash wages and waived rent for resident employees.

[d] Includes some unpaid labor by persons other than owners or tenants; value of unpaid labor was estimated by respondent.

[e] Includes unpaid labor by owners, their families, or friends. Usually the value of the labor was estimated by the owner; where imputation was necessary, labor was valued at $4 per hours.

[f] Total cash receipts less total cash expenses.

[g] Total cash and waivers less total operating expenses.

[h] Principal and interest payments on mortgage debt or land contracts for which the sample property was collateral.

[i] Net cash income less debt service and cost of improvements.

[j] Pretax cash flow as percentage of potential gross income.

[k] Estimate by HASE staff of real annual depreciation due to age of capital improvements on each sample property. Unrelated to depreciation allowances for income tax reporting.

[l] Net operating income less depreciation allowance.

[m] Estimated by the owner.

[n] Net operating income as percent of estimated market value.

[o] Net return to capital as percent of estimated market value.

total operating expenses. This figure excludes depreciable capital improvements, which are not listed under "operating expenses."

The performance measures in the last section of the table were calculated by us from the income and expense data provided by respondents; they provide various perspectives on the profitability of rental properties in Brown County. Overall, the net cash income from operations amounted to nearly $8.5 million. When this figure is adjusted by adding the value of waived rent and subtracting the value of unpaid labor, we calculate that the true net operating income was less, about $6.3 million.

Debt service on these properties amounted to nearly $8.5 million, including both interest on mortgages and repayment of principal. Thus, net cash income barely covered debt service, and net operating income fell short of covering it by about $2.2 million. Furthermore, the owners spent another $2.9 million on amortizable improvements during 1973. The appropriate conclusion is that these properties, as a group, were not yielding a current flow of cash to their owners. Rather, the owners were pumping cash and labor into them in order to pay mortgage interest, accumulate equities, and improve the properties.

This conclusion, clear in the aggregate, does not apply to every property. In fact, 49 percent of these properties were owned free and clear, so that the full operating profit accrued to the owner as a return on his investment.

No matter how the flow of cash income was divided between the owners and the mortgage holder, we can estimate rates of return on capital for most of these properties. The final section of Table 4.6 also shows these estimates. The simplest approach is to divide net operating income by the estimated market value of the properties to obtain a gross rate of return. We calculate this rate to be about 3.1 percent. If allowance is first made for depreciation of capital improvements on each property due to aging, the net rate of return is only 2.4 percent.

We expect many of our readers will be astonished by these low rates of return, especially in a housing market that gives every sign of health: a low vacancy rate, a well-maintained housing stock, good relationships between landlords and tenants, a substantial amount of new construction each year. Clearly, the expectation of a 3-percent rate of return would not prompt many new investments in rental real estate if compared with a borrowing rate of 7.5 percent—the average rate on first mortgages issued in Brown County during 1973.

We too were surprised, and have examined these data from a number of perspectives in search of an explanation. We have not finished our probing, but a few points may be noted.

First, individual properties—indeed, whole classes of properties—deviate from the overall rate of return. Table 4.7 summarizes the data separately for each of seven property types. Note that the gross rate of return on regular properties with five or more units is 5.6 percent, more than twice the average rate; and on mobile home properties, the rate is nearly twice as high, 4.5 percent. For all other types of properties listed in the table—including the dominant type, those with two to four units—the rate of return is under 3.0 percent.

The properties with above-average returns have three obvious characteristics in common: they tend to be large, they are usually new, and they were developed specifically as rental real estate. These characteristics also distinguish them from the low-yield properties, many of which were originally owner-occupied single-family homes later converted to rental properties. These factors may account for the

Table 4.7

Summary of Financial Statements for 6,846 Rental Properties, by Type of Property: Brown County, Wisconsin, 1973

Item	Annual Amount ($000) or Rate (%), by Type of Property							
	5+ Units	2-4 Units	1 Unit, Urban	1 Unit, Rural	Mobile Home	Rooming House	Farm	All Types
Potential Gross Income								
Total cash and waivers	4,720	12,596	2,507	298	466	204	268	21,054
Total income lost	403	742	242	26	58	47	14	1,533
Potential gross income	5,123	13,338	2,749	324	524	251	282	22,587
• Realization rate (%)[a]	92.1	94.4	91.2	92.0	88.9	81.3	95.0	93.2
Operating Expenses								
Total cash expenses	1,850	5,264	1,201	154	187	116	171	8,941
Value of unpaid labor	467	4,122	761	82	78	118	163	5,792
Total operating expenses	2,317	9,386	1,962	236	265	234	334	14,733
• Self-employment rate (%)[b]	20.2	43.9	38.8	34.8	29.4	50.4	48.8	39.3
Net Income and Cash Flow								
Net cash income	2,772	4,211	1,092	88	271	65	(33)	8,464
Net operating income	2,403	3,210	545	62	201	(30)	(66)	6,321
Debt service	2,191	5,004	840	101	125	66	168	8,496
Amortizable improvements	147	1,875	341	56	248	56	180	2,903
Pretax cash flow	434	(2,668)	(89)	(69)	(102)	(57)	(381)	(2,935)
• Cash flow rate (%)[c]	8.5	(20.0)	(3.2)	(21.3)	(19.5)	(22.7)	(135.1)	(13.0)
Return on Capital								
Net operating income	2,403	3,210	545	62	201	(30)	(66)	6,321
Depreciation allowance	581	714	40	4	74	1	4	1,417
Net return to capital	1,822	2,496	505	58	127	(31)	(70)	4,904
Estimated market value	43,252	116,975	29,836	4,437	4,455	1,740	4,454	205,149
• Gross rate of return (%)[d]	5.6	2.7	1.8	1.4	4.5	(1.7)	(1.5)	3.1
• Net rate of return (%)[e]	4.2	2.1	1.7	1.3	2.8	(1.8)	(1.6)	2.4

SOURCE: Tabulations by HASE staff of records of the survey of landlords, Site I, baseline.

NOTE: See notes to Table 4.6 for definitions of income and expense items. See below for definitions of performance measures. Entries may not add to totals because of rounding. Negative entries are enclosed in parentheses.

[a] Total cash and waivers as percentage of potential gross income.

[b] Value of unpaid labor as percentage of total operating expenses.

[c] Pretax cash flow as percentage of potential gross income.

[d] Net operating income as percentage of estimated market value.

[e] Net return to capital as percentage of estimated market value.

differences in yields by type of property but do not clearly explain the very low yields of small rental properties.

A second point, especially applicable to the small properties, it that unpaid labor is a major element of their operating expense. Although it amounts to only 20 percent for properties with five or more units and 29 percent of the total for mobile home properties, unpaid labor accounts for 44 percent of operating expenses on properties with two to four units and 35 to 50 percent for the remaining property types. Our respondents may have systematically overestimated the hours per week they, their families, and their friends worked on these properties, or they may have had an inflated idea of the market value of this labor. If so, the low rate of return would be at least partly attributable to an overestimation of expenses.

As an alternative to the possibility that owners systematically overestimate the market value of such labor inputs, we should consider the possibility that they answered our questions accurately but view their own labor as having a lower opportunity cost than hired labor. This seems particularly likely in the case of a resident landlord who may even enjoy gardening and domestic chores but in any case can combine such activities easily with regular employment elsewhere. For such a person, investment in rental property creates an opportunity for extra earnings that he could not get by a corresponding investment in, say, securities.

A third possibility is that owners systematically overestimate the market value of their properties, thereby depressing the calculated rates of return. If this were so, we would expect owners to be dissatisfied with the properties' yields; but we have seen that such is not the case.

The most attractive general solution we find to the enigma of low rates of return is that our calculation ignores expected long-term capital gains from holding real estate. If an owner with a net rate of return of 3 percent expected the value of his property to increase at (say) 5 percent annually, the expected annual yield would be roughly 8 percent. We know that owners in Brown County generally believe their properties have increased and will continue to increase in value, but we cannot quantify their expectations except by inference.

A final point worth mentioning is that the five submarkets of regular rental housing tentatively identified by our analysis of vacancy rates and vacancy duration also differ significantly in their rates of cash flow, their rates of return on capital, or both. For instance, high-rent properties with five or more units yielded a net return on their aggregate market value of 5.3 percent, but low-rent properties of this type yielded only 1.9 percent. Among properties with two to four units, those with new buildings yielded 3.2 percent, but those with old buildings yielded only 1.3 percent. That such differences exist between these groups is further evidence that they form noncompetitive submarkets.

TENANTS AND HOMEOWNERS AT BASELINE

From the survey of tenants and homeowners (and from other sources), we estimate that there were 49,000 households in Brown County at the beginning of 1974. This figure does not include transients, persons living in group quarters such as student dormitories, or the inmates of institutions such as hospitals or prisons. However, it does count lodgers in rooming houses or private homes as separate households.[5]

The analysis that follows does not deal with all these households, but excludes three special groups that account for about 12 percent of the total. The largest excluded group consists of about 3,200 households containing landlords (or their agents); persons to be interviewed as landlords were deliberately skipped by the survey of tenants and homeowners. The next largest group consists of some 1,300 occupants of federally subsidized housing units (about 700 homeowners and 600 renters), also deliberately skipped by the survey. Although we interviewed lodgers

[5] A household is a person living alone or a group of people who share a housing unit, living and eating together. Usually, but not necessarily, members of a household are related by blood or marriage. The related members of a household constitute a family.

and mobile home residents, their interview records, representing about 1,300 (usually small) households, present special problems that preclude their analysis here. Thus, the data presented below pertain to about 42,600 households who live as tenants or homeowners in regular unsubsidized housing units and are not themselves landlords, and their characteristics may differ slightly from the characteristics of those excluded. However, for simplicity in exposition, we speak below of the sampled population as though it fully represented Brown County.[6]

Households in Brown County are close to national norms with respect to economic and social characteristics such as household income and the education and employment status of household members. They do, however, differ in several important demographic characteristics. First, over 98 percent of them are headed by whites (vs. 89 percent nationally), and about two-thirds have ethnic origins in northern Europe. The only conspicious minority group consists of about 400 households of American Indians, most of whom live on tribal lands in the rural part of the county. This racial and ethnic homogeneity eliminates from Brown County many of the conflicts in life styles and community affairs that capture the attention of observers and analysts of more heterogeneous communities, especially in studies of housing-market behavior.

As compared with the nation as a whole, Brown County's households are younger and more family oriented. The median age of household heads in the sample is almost five years less than in the nation (42.7 years vs. 47.3 years). Households in the sample are larger, averaging 3.4 persons, vs. 3.0 for the nation. A larger proportion of households in the sample are headed by married couples (73 percent) than in the nation (67 percent). Though it is different from national norms, Brown County is similar in these respects to many smaller metropolitan areas, especially those of the midwestern, north central, and western states.

A Life-cycle Classification of Households

For our purposes here, demographic differences between households within Brown County are considerably more important than differences between local and national averages. The size and composition of a household manifestly influence its housing preferences and priorities. These characteristics interact with income and cultural heritage to determine the types of housing chosen, the level of housing expenditures, and the amount of residential mobility. The absence of much racial or ethnic difference in Brown County serves to emphasize the other differences.

To distinguish types of households that usually behave differently in the housing market, we have devised the system of classification shown in Table 4.8, which is based jointly on the number of household heads (i.e., one or two), their marital status, their ages, the presence or absence of children in the household, and the age of the youngest child. Our system by no means exhausts the possible dimensions of demographic difference between households, but it defines eight common household types in sufficiently general terms so that only a small residual category is needed to account for those that do not fit into the scheme.[7] We call it a life-cycle classifica-

[6] Future analyses will incorporate data for lodgers and mobile home residents, but we do not ever expect to include landlords or occupants of subsidized housing units.

[7] The population represented by our sample includes only about 66 households that cannot be classified in Stages 1 to 8. These are not listed separately in later tables, but are included in the entries for "all stages."

Table 4.8

A Life-cycle Classification of Households

Stage in Life Cycle	Definition
1. Young single head, no children	Household headed by single adult (man or woman) under 46 years old, no members under 18 years old.
2. Young couple, no children	Household headed by married couple, husband under 46 years old, no other members under 18 years old.
3. Young couple, young children	Houschold headed by married couple, husband under 46 years old, at least one other member under 6 years old.
4. Young couple, older children	Household headed by married couple, husband under 46 years old, at least one other member between 6 and 18 years old.
5. Older couple, older children	Household headed by married couple, husband at least 46 years old, at least one other member under 18 years old.
6. Older couple, no children	Household headed by married couple, husband at least 46 years old, no other members under 18 years old.
7. Older single head, no children	Household headed by single person (man or woman) at least 46 years old, no other members under 18 years old.
8. Single head with children	Household headed by single person (man or woman) under 60 years old, at least one other member under 18 years old.
9. All other	Residual category; most are households headed by single persons over 60 years old who live with married children and grandchildren.

SOURCE: Classification scheme devised by HASE staff for analysis of data from surveys of tenants and homeowners.

NOTE: Household heads are designated by survey respondents. A married couple consists of a cohabiting man and woman. A single household head may have never been married; or may have been married but was separated, divorced, or widowed at the time of the interview. Other household members need not be but usually are related to the household head(s); those under 18 are usually children of the head(s).

tion because most households pass through at least several of these stages in the order shown.

Typically, the life cycle of a household begins when a young unmarried individual leaves the parental home to form a separate household, alone or with friends (Stage 1). The Census Bureau estimates that approximately 95 percent of all persons eventually marry, thus entering Stage 2 as childless couples. Similarly, between 90 and 95 percent of all married couples bear at least one child[8] and pass through the next several stages as a matter of course. An increasingly frequent departure from this natural progression is marital disruption through separation, divorce, or death of one spouse (Stage 8).

Table 4.9 shows the distribution of Brown County households by life-cycle stage and summarizes the demographic characteristics of each stage. It is important to remember that the data presented in this and later tables represent the characteristics of households in each life-cycle stage at a given time, not the progression through stages of a given set of households. Nonetheless, our interpretation of the data assumes that these cross-sectional differences would be equally reflected in longitudinal differences.

Over 40 percent of all households in Brown County are in the first three stages, a local manifestation of the nationwide increase in the population of persons 20 to

[8] See U.S. Bureau of the Census, *Current Population Reports*, P-23, No. 49, "Population of the United States, Trends and Prospects: 1950-1970," U.S. Government Printing Office, Washington, D.C., 1974.

Table 4.9

Distribution of Households and Selected Household Characteristics, by Life-cycle Stage: Brown County, Wisconsin, 1974

Stage in Life Cycle	Distribution of Households		Average Age of Male or Only Head	Average Number of Members		
				All Members	Other than Heads	
	Number	Percent			Under 18	18 or Over
1. Young single head, no children	3,656	8.6	25.4	1.65	--	.65
2. Young couple, no children	3,093	7.3	26.4	2.01	--	.01
3. Young couple, young children	11,073	26.0	31.5	4.53	2.47	.06
4. Young couple, older children	4,332	10.2	38.9	5.16	2.78	.38
5. Older couple, older children	5,007	11.8	51.8	5.46	2.41	1.05
6. Older couple, no children	7,649	18.0	62.8	2.27	--	.27
7. Older single head, no children	5,548	13.0	67.1	1.23	--	.23
8. Single head, with children	2,164	5.1	37.2	3.60	2.17	.43
All stages	42,587[a]	100.0	44.3	3.39	1.32[b]	.33

SOURCE: Tabulations by HASE staff of records of the survey of tenants and homeowners, Site I, baseline.

NOTE: Entries are estimates based on a stratified probability sample of 3,722 households. Data base excludes about 12 percent of all households living in Brown County in 1974; see text for explanation of exclusions.

[a]All households living in unsubsidized regular housing units except resident landlords. Total includes an estimated 66 households not classified by life-cycle stage. Distribution does not add exactly to total because of rounding.

[b]Average for all households with children is 2.48.

30 years old that resulted from the postwar "baby boom." An additional factor contributing to the large proportion of young couples with young children (Stage 3) is that this stage is a long one for most households. It lasts from the birth of the first child to six years after the birth of the last one.

The definition of stages accounts in large part for the ascending sequence of average ages and the accordion pattern of household sizes—expanding up to Stage 5, then contracting first as the children mature and leave home, then as one of the spouses dies.

The demographic changes that mark the life-cycle progression do not occur in isolation. Accompaning this progression are changes in the households' social and economic circumstances that will also affect housing choices.

Ordinarily, a household's integration into its community increases as children become established in school, husbands and wives settle into careers, and close relationships are formed with neighbors. These ties should reduce the household's willingness to move, except locally. Perhaps the most important changes accompanying the life-cycle progression occur in labor-force participation by household members and in household income. Several factors contribute to these changes. Foremost among them is the general correspondence between the life cycle and the career development of the male head of the household.

Just as Stage 1 marks the individual's formation of a new household, it also usually marks his economic independence and the beginning of regular fulltime employment. In this stage, his earnings are usually low, but they usually increase as he develops occupational skills and acquires seniority. Eventually, he retires from the labor force because of age or disability, at which point there is usually a sudden and sharp drop in household income.

The male head's employment history is, of course, not the only element in a household's employment and income. Labor-force participation by wives and adolescent children is common and contributes substantially to the earnings of many households.

The correspondence between life-cycle stage and the employment of household heads in Brown County can be seen in Table 4.10. Eighty-four percent of the young single household heads (Stage 1) are employed, even though almost a fourth of them are still in school. Among married couples, the husbands are nearly all employed until Stage 6, when many of them reach the normal age of retirement. The employment of married women follows a different pattern. In Stage 2, two-thirds are employed, but that proportion drops sharply with the arrival of the first child. A good many married women subsequently reenter the labor force when their children reach school age. The frequency of employment among older children can be seen

Table 4.10

Employment and Income Characteristics of Households, by Life-cycle Stage: Brown County, Wisconsin, 1974

Stage in Life Cycle	Percentage of Households with:				Average Number of Workers	Median Income ($) in 1973
	Male or Only Head[a]		Wife Employed	No Members Employed		
	In School	Employed				
1. Young single head, no children	23.3	83.7	(b)	7.1	1.40	7,564
2. Young couple, no children	11.6	90.9	67.2	1.8	1.59	13,433
3. Young couple, young children	4.5	95.6	30.6	2.4	1.30	12,656
4. Young couple, older children	1.3	97.9	48.6	1.1	1.74	14,593
5. Older couple, older children	.9	92.3	34.2	1.2	2.15	17,549
6. Older couple, no children	--	61.2	27.1	29.6	1.07	10,965
7. Older single head, no children	--	35.3	(b)	57.5	.51	4,697
8. Single head, with children	8.4	56.4	(b)	35.6	.75	5,704
All stages	4.7	77.9	36.5[c]	16.3	1.30	11,988

SOURCE: Tabulations by HASE staff of records of the survey of tenants and homeowners, Site I, baseline.

NOTE: Employment entries are estimates based on a stratified probability sample of 3,722 households; income entries are based on a smaller sample of 3,223 households reporting complete income information. Data base excludes about 12 percent of all households living in Brown County in 1974; see text for explanation of exclusions.

[a] Household heads in school may also be employed.

[b] Not applicable.

[c] Base for percentage includes only households headed by a married couple.

in Stages 4 and 5, where the average numbers of workers exceed the sums of employed husbands and wives.

The variation in household income over the life cycle reflects these employment patterns. Income reaches its first peak in Stage 2, when both husbands and wives are usually employed. It drops when the wives leave the labor force to care for their young children and then rises as mothers return to the labor force and both husbands and wives acquire skills and seniority in their jobs. Household income reaches its peak in Stage 5, when the number of workers in the household is also at its peak, often including the husband, the wife, and one or more of the older children. As the children leave home and the heads retire from the labor force (Stages 6 and 7), household income drops sharply.

This decline in household income in Stages 6 and 7 is accompanied by changes in income sources. Our data indicate that earnings drop from an average of over 90 percent of total income in Stages 1 through 5, to 60 percent and 30 percent in the two final stages. The sources that replace earnings are primarily pensions and social security; secondarily, property incomes, interest on savings, or public assistance.

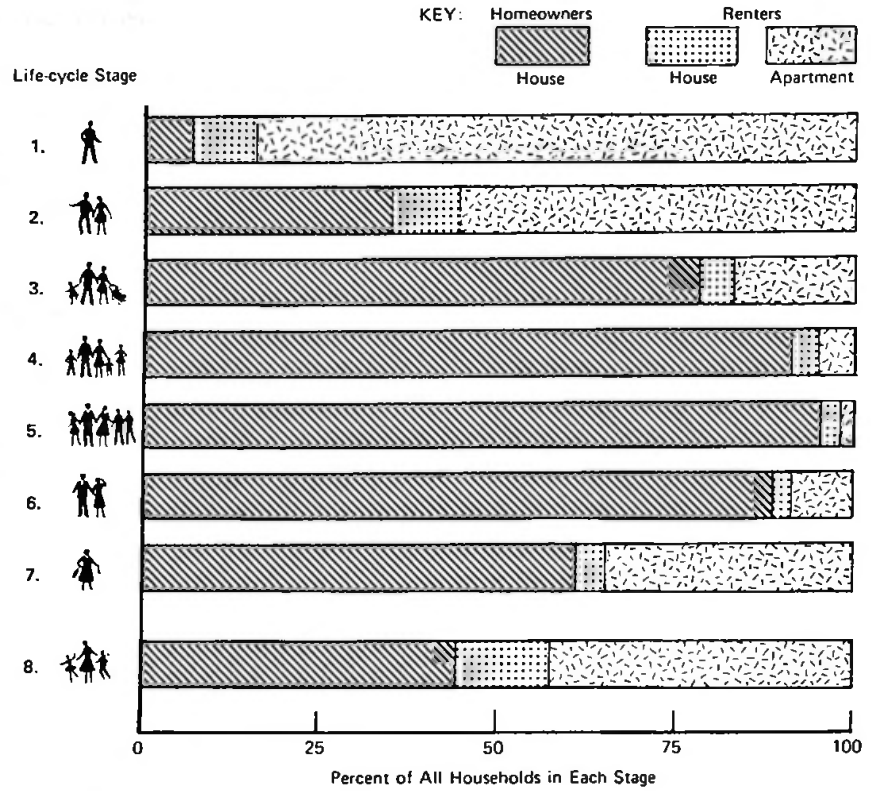
Life-cycle Stages and Housing Consumption

These data suggest that there should be a particularly strong relationship between housing consumption and progression through the life cycle. Movement through life-cycle stages brings characteristic changes in the size and composition of households and consequently in their housing requirements. The concomitant changes in the household's social and economic characteristics, particularly the changes in income, affect the household's ability to adjust its consumption accordingly. In general, these two kinds of changes complement each other, but not always. For example, between Stages 2 and 3, average household size increases by 2.5 persons but household income decreases. The increased space requirements of these larger households, along with their increased requirements for food and clothing, must often be met with the same or a smaller budget, forcing many households to compromise in their housing choices; for the less affluent, this is likely to be a period of privation.

In later stages, household consumption needs and the means to satisfy them are better balanced. Peak household size occurs in Stage 5, which is also the stage of peak household income. When income begins to drop sharply (Stages 6 and 7), the number of persons to be supported by that income also decreases sharply.

Tenure and Type of Housing Unit. Although most single-family houses are owner-occupied and most apartments in multiple dwellings are renter-occupied, it is important to distinguish tenure and type of housing as separate dimensions of housing choice. As households move through the life cycle, there are characteristic shifts in tenure from rental to ownership and back to rental. Although owners nearly always live in single-family houses, there are also characteristic changes in the type of housing selected by renters at different stages of the life cycle.

Figure 4.3 displays the main features of these two choices in relation to life-cycle stages. Less than 7 percent of all young single household heads are homeowners; the others rent their homes, and 90 percent of these renters live in apartments. This pattern is, of course, consistent with the relatively small space requirements, the relatively low incomes, and the considerable occupational and demographic instabil-



SOURCE: Survey of tenants and homeowners, Site I, baseline

Fig. 4.3—Distribution of households in each life-cycle stage, by tenure and type of housing unit: Brown County, Wisconsin, 1974

ity of these households. The incidence of homeownership rises sharply thereafter, reaching 95 percent in Stage 5. Nearly all these homeowners occupy single-family houses. Among renters in the middle of the life cycle, there is also a decided shift from apartments to single-family houses; by Stage 5, nearly 60 percent of the renters and 98 percent of all households live in single-family houses.

In the later stages of the life cycle, when the children have left home and finally when one of the spouses dies, the incidence of both ownership and of renters in single-family houses declines. In Stage 7, only 45 percent of all households own their homes and only 10 percent of all renters live in single-family houses.

When the patterns shown in the figure are considered in conjunction with the data on household characteristics by life-cycle stage, two important ideas emerge. First, although nearly everyone in Brown County lives in a single-family house during the peak years of his household's size and income, few people spend all their adult years in such a residence. Second, renters and homeowners in the same life-cycle stages appear to be less distinguished by different housing preferences than by different resources for satisfying these preferences. Thus, it is likely that more renters in the middle of the life cycle would prefer single-family homes to apartments but cannot afford them.

The preference for single-family homes characteristic of the middle stages of the life cycle undoubtedly reflects how important indoor and outdoor space is to households with children. The role of income as a constraint on this preference is less straightforward because it tends to vary over life-cycle stages in parallel with the number of children in the household. However, there is considerable variation in income among households within a given stage, which is likely to affect the choice of both housing type and tenure.

The data shown in Table 4.11 indicate that with only one exception, Stage 3, renters and owners in the same life-cycle stage have households of approximately the same size, so that both groups of households should experience similar pressures for living space. A notable difference between owners and renters is in their ages. In the earlier stages of the life cycle, household heads who are owners tend to be older than those who are renters; in the later stages, owners tend to be younger than renters. Thus, at each stage, owners are closer than renters to their peak lifetime earnings.

These differences in age are one factor accounting for the pattern of income differences between owner and renter households at each life-cycle stage, also shown in Table 4.11. This pattern indicates that owners are more prosperous than renters in all stages, and especially so in Stages 2, 5, and 6. In the earlier stages, they are therefore better able to accumulate a downpayment on a house before the wife

Table 4.11

Household Characteristics of Owners and Renters, by Life-cycle Stage: Brown County, Wisconsin, 1974

Stage in Life Cycle	Average Number of Members		Average Age of Male or Only Head		Median Income ($) in 1973	
	Owners	Renters	Owners	Renters	Owners	Renters
1. Young single head, no children	1.26	1.68	35.3	24.7	10,907	7,313
2. Young couple, no children	2.00	2.01	29.4	24.9	17,637	11,565
3. Young couple, young children	4.73	3.83	32.8	27.1	13,084	10,325
4. Young couple, older children	5.16	5.17	39.2	36.3	14,733	12,891
5. Older couple, older children	5.46	5.55	51.7	54.2	18,218	11,282
6. Older couple, no children	2.28	2.18	62.7	64.2	11,360	7,500
7. Older single head, no children	1.29	1.14	67.6	66.3	5,077	3,948
8. Single head with children	4.06	3.26	44.1	31.7	9,004	4,669
All stages	3.81	2.42	47.7	36.4	13,205	8,153

SOURCE: Tabulations by HASE staff of records of the survey of tenants and homeowners, Site I, baseline.

NOTE: Entries for household size and age of head are based on a stratified probability sample of 887 owner households and 2,835 renter households. Entries for household income are based on samples of 733 owner households and 2,490 renter households who provided full information about household income. Data base excludes about 12 percent of all households living in Brown County in 1974; see text for explanation of exclusions.

leaves the labor force to have children. In the later stages, the more prosperous homeowners are less often impelled to economize by moving to smaller homes after their children have left the household.

Size of Housing Unit. Housing is a complex commodity, and differences in tenure and type of units by no means encompass a household's range of choices. The decision to live in a single-family house rather than in an apartment will be based in part on such other factors as unit size and cost. We have already described single-family houses as more spacious than apartments in multiple dwellings. This characterization is appropriate both in the narrow sense of number of rooms and in the broader sense of insulation from neighbors and access to private outdoor space.

In Brown County, the average number of rooms in owner-occupied single-family houses is 6.02, in renter-occupied single-family houses, 5.22; in small (2–4 unit) multiple dwellings, 4.17 rooms; and in large (5+ units) multiple dwellings, 3.43 rooms. Although we do not have such exact information about the size of yards, it is clear that those who live in multiple dwellings have less access to private outdoor space.

The variation in average unit size and persons per room by life-cycle stage for owners and renters is reported in Table 4.12. Households in both tenure classes tend to increase their space consumption as household size increases (Stages 1 to 5), then to reduce it as household size shrinks, in Stages 6 and 7. However, owners have larger units than renters at every life-cycle stage. These differences are largest (about 1.7 rooms) among young childless couples (Stage 2) and among older single-

Table 4.12

Size of Housing Unit and Persons per Room, by Housing Tenure and Life-cycle Stage: Brown County, Wisconsin, 1974

Stage in Life Cycle	Average Number of Rooms per Unit		Average Number of Persons per Room	
	Owners	Renters	Owners	Renters
1. Young single head, no children	5.14	3.69	.25	.46
2. Young couple, no children	5.65	3.99	.37	.54
3. Young couple, young children	6.10	4.66	.80	.83
4. Young couple, older children	6.52	5.39	.82	.98
5. Older couple, older children	6.61	5.81	.84	.96
6. Older couple, no children	5.57	4.42	.43	.52
7. Older single head, no children	5.52	3.81	.24	.32
8. Single head with children	5.79	4.77	.70	.68
All stages	6.02	4.19	.64	.57

SOURCE: Tabulations by HASE staff of records of the survey of tenants and homeowners, Site I, baseline.

NOTE: Entries are based on a stratified probability sample of 887 owner households and 2,835 renter households. Data base excludes about 12 percent of all households living in Brown County in 1974; see text for explanation of exclusions.

headed households (Stage 7); they are smallest (0.8 rooms) for older couples with children (Stages 5 and 6). This pattern in average unit size, along with the accompanying person-per-room ratios, suggests that childless couples purchase homes larger than they currently need in anticipation of future growth in household size; and that older households are reluctant to move to smaller homes after the departure of their children.

The table shows that renters are consistently more crowded than homeowners. One might attribute this fact to the consistently lower incomes of renters. However, Fig. 4.4 indicates that income has little influence on space consumption by renters. At each stage of the household life-cycle, both poor and prosperous renters have about the same number of persons per room. As we shall see, the more prosperous renters within each life-cycle stage do spend more for housing, but the desire for more space does not appear to be the motivating factor.

Income and Housing Expenditures: Renters. In Table 4.13, we report the average monthly gross rent for the renter households paying full rent, by life-cycle stage and income bracket. For households in each income bracket, expenditures follow the expectable pattern over life-cycle stages, reflecting changes in space consumption. For households within each stage, expenditures have a general tendency to increase with income, but the amounts of increase are irregular and surprisingly small.

A clearer picture of the relationship between income and housing expenditures can be seen in Fig. 4.5, which is based on rent/income ratios computed for individual

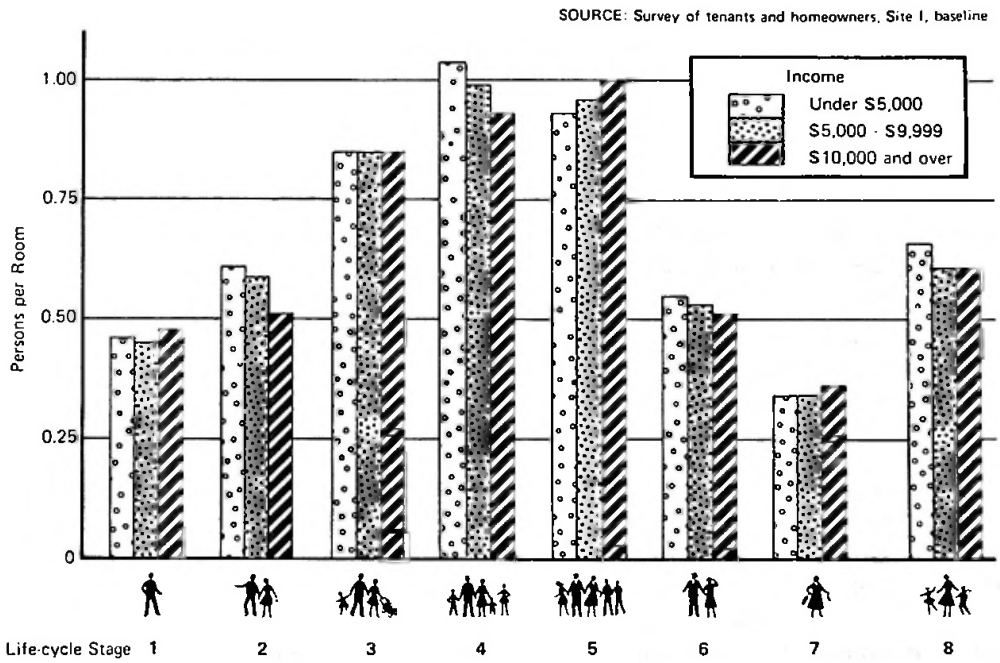


Fig. 4.4—Persons per room, by income and life-cycle stage: renters in Brown County, Wisconsin, 1974

Table 4.13

Housing Expenses, by Income and Life-cycle Stage: Renter Households in Brown County, Wisconsin, 1974

Stage in Life Cycle	Average Monthly Gross Rent[a] ($) by Income ($) in 1973			
	Under 5,000	5,000–9,999	10,000 or Over	All Incomes
1. Young single head, no children	116	131	150	133
2. Young couple, no children	129	132	158	148
3. Young couple, young children	137	145	157	150
4. Young couple, older children	141	149	173	166
5. Older couple, older children	126[b]	150	150	145
6. Older couple, no children	130	124	193	154
7. Older single head, no children	100	113	144	111
8. Single head with children	147	150	174	151
All stages	121	135	158	140

SOURCE: Tabulations by HASE staff of records of the survey of tenants and homeowners, Site I, baseline.

NOTE: Entries are based on a stratified probability sample of 2,163 renter households who paid full market rents for their units and who provided full information about household income. Data base also excludes occupants of mobile homes and lodgers, about 3 percent of all renter households in Brown County.

[a]Contract rent plus respondent's estimate of charges for fuel and utilities paid directly by the tenant.

[b]Estimate based on fewer than 10 observations.

households. Although the differences between stages generally disappear, the average ratios drop sharply as income increases. Households in the lowest income bracket spend almost twice the proportion of their incomes on housing as do those in the middle bracket, and over three times the proportion as do those in the upper bracket. These data suggest that income, not life-cycle stage, is the important variable in explaining current housing expenditures; life-cycle variables, on the other hand, do better at explaining what is bought—e.g., the size and type of housing unit chosen.

Income and Housing Expenditures: Homeowners. Estimating housing expenditures for homeowners is a considerably more difficult task than it is for renters. While gross rent is a relatively accurate measure of a renter's total housing expenditures, a comparable measure for owners needs to include not only debt service, real estate taxes, insurance premiums, and utility expenditures, but also the imputed value of a homeowner's time spent on maintenance and repair as well as the opportunity costs entailed in buying a home rather than investing equivalent savings in some other way. Since we are still working on these accounting problems, we will not report on the current housing expenses of homeowners here.

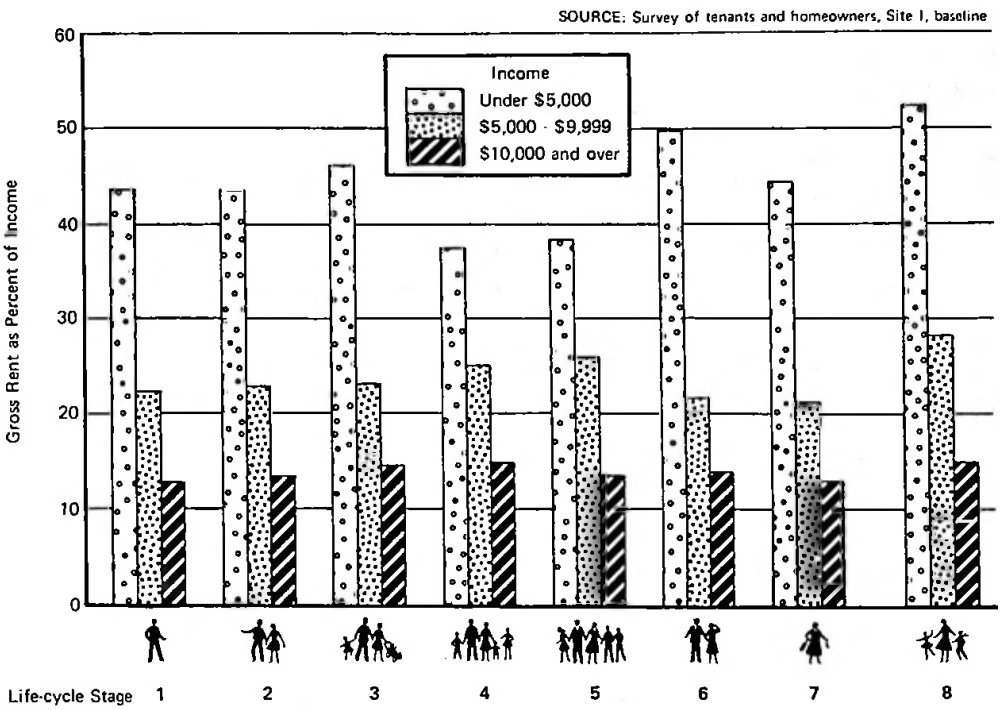


Fig. 4.5—Rent/income ratios, by income and life-cycle stage: renters in Brown County, Wisconsin, 1974

However, we can show how the values of owner-occupied homes vary by life-cycle stage and how they relate to household incomes at each stage (Table 4.14). Like renters' housing expenses, average home values tend to increase from Stage 1 through Stage 4, then to decrease through Stage 7. Although disrupted renter households (Stage 8) pay relatively high rents, disrupted owner households occupy relatively inexpensive housing.

As with renters, there is some question whether the pattern of home values shown in the table reflects the sequence of life-cycle stages or whether it reflects the variations over the cycle in household incomes, which show a similar pattern of increase and decrease. Indeed, there is some question why average home values should reflect either variable, given that over two-thirds of all homeowners had been in their present homes for at least five years and therefore were likely to have acquired them during a different life-cycle stage, when their incomes were higher or lower than in 1973.

The second and third columns of the table cast some light on these issues. The second column shows average household income, and the third column shows the ratio of the average home value to average income for households in each life-cycle stage.[9] During the first four stages, the value/income ratio fluctuates within a

[9] Unlike the rent/income ratios in Fig. 4.5, these ratios were calculated by first averaging the individual observations on home values and on income, then dividing. Such a "ratio estimate" is more reliable for the small samples in some rows of Table 4.14. Also, note that the denominators are *average* household incomes, not the median incomes shown in Table 4.11.

Table 4.14

Value/Income Ratios and Mortgage Status, by Life-cycle Stage: Owner Households in Brown County, Wisconsin, 1974

Stage in Life Cycle	Average Value ($) of Home[a]	Average Income ($) in 1973	Value/ Income Ratio	Percent of Homes with Mortgages[b]
1. Young single head, no children	15,600	9,300	1.68	73.8
2. Young couple, no children	26,900	15,900	1.69	100.0
3. Young couple, young children	25,500	14,200	1.80	93.0
4. Young couple, older children	28,000	16,300	1.72	79.6
5. Older couple, older children	25,700	19,300	1.33	59.4
6. Older couple, no children	21,000	12,400	1.69	25.2
7. Older single head, no children	19,100	7,700	2.48	11.4
8. Single head with children	16,500	9,000	1.83	63.0
All stages	24,200	14,300	1.69	60.1

SOURCE: Tabulations by HASE staff of records of the survey of tenants and homeowners, Site I, baseline.

NOTE: Entries are based on a stratified probability sample of 701 homeowners who provided full information about their incomes and were able to estimate the market values of their homes. Data base also excludes about 10 percent of all homeowners in Brown County for other reasons; see text for explanation of these exclusions.

[a] Respondents' estimates, averaged for all respondents in each category and rounded to the nearest $100.

[b] Includes homes encumbered by mortgages or being purchased under land contracts. The latter amount to about 3 percent of all encumbrances.

narrow range, 1.68 to 1.80. Thereafter, it changes drastically from one stage to the next.

Our interpretation of this pattern is that the first four stages are those during which over 90 percent of all households become homeowners, and the values of their recently acquired homes match their current incomes fairly well. It is particularly interesting that the highest ratio during these four stages is for Stage 3; earlier, we noted that this is the stage at which income often drops because the wife leaves the labor force to have and care for children, an event likely to occur soon after the purchase of a home.

We think the ratio fluctuates so much in the later stages because the homes were acquired some years earlier and the decisions to buy them were based on the quite different incomes then prevailing, whereas our ratios reflect 1973 incomes. For example, the ratio's sharp drop to 1.33 in Stage 5 reflects home values comparable with those of Stages 2 and 3, combined in Stage 5 with the life-cycle peak in average income. Subsequently, income drops sharply, so the ratio climbs; by Stage 7, when average household income is at its life-cycle minimum, the value/income ratio has risen to 2.48.

The last column of Table 4.14 explains why households in the later life-cycle stages are not catastrophically overburdened by housing costs as their incomes decrease. In Stages 2 and 3, nearly every home is mortgaged; but by Stage 6, three-fourths of them are debt free and by Stage 7, nearly 90 percent are debt free. When there are no mortgage payments to meet, the value/income ratio loses much of its significance as an indicator of housing expenses and becomes instead a measure of a household's asset position.

Life-cycle Stages and Residential Mobility

It is common knowledge that people tend to move less frequently as they grow older, settle into a job, and acquire a family and a home. Brown County's population is no exception, but it is interesting to examine the pattern of residential mobility there in some detail.

Table 4.15 presents the basic data by life-cycle stage and tenure. The first three columns deal with moves made during the year preceding each respondent's interview; the last three deal with moves made in the preceding five years.

The data show tremendous differences in the mobility of renters and homeowners. About half of all renters moved during the preceding year and 84 percent moved during the preceding five years. For homeowners, the corresponding rates are 7 and 32 percent. However, in all cases there is a sharp decrease in mobility from the early

Table 4.15

Residential Mobility, by Housing Tenure and Life-cycle Stage: Brown County, Wisconsin, 1974

Stage in Life Cycle	Percentage of Households That Moved During Preceding Year[a]			Percentage of Households That Moved During Preceding 5 Years[b]		
	Owners	Renters	Total	Owners	Renters	Total
1. Young single head, no children	9.6	72.6	68.5	65.1	95.7	93.7
2. Young couple, no children	45.0	65.7	58.6	78.7	98.9	91.9
3. Young couple, young children	14.2	43.6	20.8	62.6	91.5	61.9
4. Young couple, older children	8.3	32.9	10.4	28.0	72.6	31.9
5. Older couple, older children	.5	18.5	1.3	12.6	54.7	14.5
6. Older couple, no children	.6	27.9	3.7	10.9	63.9	16.8
7. Older single head, no children	.7	23.2	9.4	13.2	55.5	29.6
8. Single head with children	8.9	45.4	29.3	21.4	87.4	58.2
All stages	7.4	49.8	20.1	31.7	84.3	47.5

SOURCE: Tabulations by HASE staff of records of the survey of tenants and homeowners, Site I, baseline.

NOTE: Entries are based on stratified probability samples of 887 owner and 2,835 renter households. Data base excludes about 12 percent of all households living in Brown County in 1974; see text for explanation of exclusions.

[a] Year preceding the interview date.

[b] Five years preceding the interview date.

stages of the life cycle to Stage 5, with some indication of increased mobility thereafter.

The difference in mobility between renters and homeowners is quite genuine and is helpful in predicting future moves; but it is easy to confuse cause and effect. People who buy homes usually do so in part because they expect to live in them for some time. Yet once they become homeowners, their plans for residential stability are likely to be reinforced by their circumstances, so that opportunities to move that might appeal to them as renters are foregone because they are homeowners.

It is not surprising therefore that more renters than homeowners have recently moved or that more renters than homeowners also plan to move in the near future. Only 2 percent of all homeowners planned to move in the year following the interview and another 2 percent were unclear about their plans. For renters, the corresponding figures are 34 percent and 9 percent.

Local Moves and Changes in Housing Tenure. In Table 4.16 we examine the characteristics of moves over the life-cycle stages in terms of the tenure of the prior and current units. These data are limited to the 80 percent of all households who moved at least once in the five years preceding the survey and whose last prior residence was also in Brown County. Detailed data on prior residences were collected only for these local moves.

Table 4.16

Changes in Housing Tenure for Local Movers, by Life-cycle Stage: Brown County, Wisconsin, 1974

Stage in Life Cycle	Percentage Distributions of Households by Former and Current Tenure							Number of Last Local Moves
	Former Owners by Current Tenure		Former Renters by Current Tenure		New Households[a] by Current Tenure		Total	
	Owner	Renter	Owner	Renter	Owner	Renter		
1. Young single head, no children	--	5.2	3.6	69.4	1.6	20.3	100.0	2,591
2. Young couple, no children	5.3	1.0	24.8	41.8	5.5	21.5	100.0	2,287
3. Young couple, young children	14.1	.6	55.0	24.3	1.8	4.2	100.0	6,129
4. Young couple, older children	39.2	1.9	36.5	21.5	--	.9	100.0	850
5. Older couple, older children	80.6	2.5	--	16.3	.5	--	100.0	589
6. Older couple, no children	58.1	9.1	6.1	24.6	2.1	--	100.0	1,085
7. Older single head, no children	23.9	27.9	4.8	41.4	--	2.0	100.0	1,412
8. Single head, with children	3.8	9.6	12.3	66.7	--	7.6	100.0	1,136
All stages	17.6	5.1	28.7	38.1	1.9	8.7	100.0	16,079

SOURCE: Tabulations by HASE staff of records of the survey of tenants and homeowners, Site I, baseline.

NOTE: Entries compare housing tenure before and after respondent's last local move. Distributions are based on a stratified probability sample of 2,039 households whose last move occurred during the five years preceding the interview and who moved within Brown County. Data base excludes about 12 percent of all households in Brown County in 1974; see text for explanation of exclusions.

[a]Prior to last move, respondent was not a household head.

As the data indicate, the character of local moves varies with life-cycle stage. Amost 70 percent of Stage 1 moves were between rental units, and another 20 percent were to form new households in rental units. This apparent preference for renting is consistent with the transitional character of these households. Confronting the strong probability of future changes in household composition and resources, young singles limit their commitments by renting. They thus retain flexibility for future adjustments in housing consumption when their own circumstances are better defined. As that definition takes place in Stages 2 and 3, the proportion of households moving between rental units or forming new households in rental units declines sharply, and the proportion purchasing homes increases. By Stage 3 (young couples with young children), 55 percent of all moves entail a change from renting to owning and over 70 percent of all moves are into owned homes. By Stage 5, over 95 percent of all households own their homes (see Fig. 4.3). Consequently, the frequency of moves from rented to owned units declines (in our data, to zero) and the proportion of moves between owned units is at its maximum. Given that many of these households purchased their first homes earlier in the life cycle when there was a tighter balance between their resources and their consumption requirements, their moves in Stage 5 may be motivated by a shift to a more favorable balance of these factors.

Adjustments to the decreases in incomes and household sizes that are customary in life-cycle Stages 6 and 7 are reflected in a decline in the proportion of moves between owned units and an increase in the proportion of moves from owned to rented units or between rented units.

This pattern of moving corresponds to characteristic tenure changes by life-cycle stage. Only in the first stage (trivially) and in the last two stages are homeowners more likely to move to a rented unit than to another owned unit. Conversely, only in Stages 3 and 4, when most households are purchasing their first homes, are renters more likely to purchase a home than to move to another rented unit. These retrospective data on the behavior of individual households support the inferences about tenure changes by life-cycle stage that were drawn from the cross-sectional comparisons discussed earlier in this section.

Reasons for Moving. The life-cycle differences in movers' housing choices undoubtedly reflect the different circumstances that prompt moves in each life-cycle stage. Comparing the primary reasons for moving reported by households in each stage, as in Tables 4.17 and 4.18, should therefore give us additional insight into the factors at work.

Table 4.17 classifies recent movers' reported motivations into seven primary reasons for moving. Coding interview responses of this type is difficult, because different respondents may express essentially the same motivation quite differently. For example, following the birth of a couple's first child, they may decide they need a home with a second bedroom; the respondent may describe the decision as prompted by changes in family circumstances or by a desire for more space. Our coding was guided by the respondent's own emphasis, and the results shown in Table 4.18 suggest that this was a valid criterion.

Overall, a fourth of all movers mentioned some change in family circumstances as their primary reason for moving (Table 4.17). Over 40 percent mentioned a desire for homeownership, a single-family house, or more space or better quality as the primary reason. It should not be surprising in a small metropolitan area with such

Table 4.17

Classification of Primary Reasons for Local Moves and Response Frequencies: Brown County, Wisconsin, 1974

Primary Reason for Moving	Characteristic Responses Included	Response Frequency	
		Number	Percent
• Change in family circumstances	• Change in marital status, change in family size, establish own household, family or health problem, new job, job search, attend school.	4,285	26.8
• Wanted cheaper housing	• Wanted lower rent, cheaper place to live.	1,033	6.5
• Wanted change in tenure or structure type	• Wanted to own, wanted to rent, wanted single-family house.	3,114	19.5
• Wanted change in space or quality	• Wanted larger or smaller unit, larger rooms, specific floorplan, nicer place, cleaner place, better quality.	3,784	23.6
• Wanted more convenient location	• Wanted to be closer to work, to schools, to retail stores.	756	4.7
• Wanted better neighborhood	• Wanted quieter neighbors, friendlier neighbors, more neighboring children, nicer neighborhood, safer area, more open space, more trees and yards.	1,538	9.6
• Had to leave former residence	• Residence no longer available, problems with landlord.	1,494	9.3
All reasons		16,004	100.0

SOURCE: Tabulations by HASE staff of records of the survey of tenants and homeowners, Site I, baseline.

NOTE: Population response frequencies are estimated from a stratified probability sample of 2,039 households whose last move occurred within the five years preceding the survey and who moved within Brown County. Data base excludes about 12 percent of all households in Brown County in 1974; see text for explanation of exclusions.

a homogeneous population that few respondents cited location (5 percent) or neighborhood characteristics (10 percent) as the motives for their moves. Involuntary moves accounted for about 9 percent of the total, and the explicit desire for cheaper housing was reported in fewer than 7 percent of all cases.

The ordering of primary reasons in Table 4.17 was chosen because it corresponds fairly well with the shifts in emphasis over the household life cycle. This correspondence is demonstrated in Table 4.18. Note there that the greatest emphasis on changes in family circumstances comes during the first two stages of life cycle; these are also the stages in which housing cost is the most salient consideration in decisions to move. During Stages 3 and 4, the emphasis shifts to tenure, type of structure, space, and quality.

During Stage 5, location suddenly emerges as the major consideration and neighborhood characteristics increase in importance. During Stages 6 and 7, the variety of frequently cited reasons increases to include changes in family circumstances, changes in space or quality, convenience of location, and neighborhood characteristics. In Stage 7, involuntary moves are prominent for the first time, accounting for over a fourth of the total.

Table 4.18

Distribution of Primary Reasons for Last Local Move, by Life-cycle Stage: Brown County, Wisconsin, 1974

Stage in Life Cycle	Percentage Distribution of Households by Primary Reasons for Moving[a]							
	Change in Family Circumstances	Wanted Cheaper Housing	Wanted Change in Tenure or Structure Type	Wanted Change in Space or Quality	Wanted More Convenient Location	Wanted Better Neighborhood	Had to Leave Former Residence	All Reasons
1. Young single head, no children	45.4	11.4	3.4	16.7	3.9	7.9	11.4	100.0
2. Young couple, no children	45.4	10.5	12.4	17.0	2.0	8.0	4.7	100.0
3. Young couple, young children	15.5	3.6	37.0	28.0	.6	10.3	4.9	100.0
4. Young couple, older children	10.8	3.2	32.5	32.7	2.5	10.7	7.7	100.0
5. Older couple, older children	13.4	1.0	10.5	6.1	41.4	18.0	9.5	100.0
6. Older couple, no children	22.1	5.6	4.0	23.3	22.8	12.8	9.4	100.0
7. Older single head, no children	32.3	3.7	5.0	21.3	2.2	8.6	26.8	100.0
8. Single head, with children	24.3	11.8	2.6	34.4	2.9	6.3	17.6	100.0
All stages	26.8	6.4	19.5	23.6	4.7	9.6	9.3	100.0

SOURCE: Tabulations by HASE staff of records of the survey of tenants and homeowners, Site I, baseline.

NOTE: Distributions are based on a stratified probability sample of 2,039 households whose last move was within Brown County. Data base excludes about 12 percent of all households in Brown County in 1974; see text for explanation of exclusions.

[a]See Table 4.17 for characteristic responses included in each reason for moving.

For disrupted households (Stage 8) outside the regular sequence of stages, the desire for changes in space or quality is the leading reason for moving, but two other reasons—changes in family circumstances and involuntary moves—are also prominent.

It should not be surprising that changes in household circumstances are so frequently cited by households in Stages 1 and 2 of the life cycle: These households were mostly formed by persons leaving their parental homes or getting married. Among young couples with children, family circumstances are less subject to drastic change, but the housing choice made in Stage 2 is increasingly inadequate for the growing, child-centered family. Hence the emphasis on homeownership, single-family houses, more space, or better quality, which were cited as primary reasons for moving by nearly two-thirds of the households in Stages 3 and 4.

The sudden emphasis on convenience of location and neighborhood quality that occurs in Stage 5 probably reflects changes both in household characteristics and in the neighborhoods chosen at earlier stages. Ninety-five percent of the couples in Stage 5 are homeowners (see Fig. 4.3) and only 13 percent had moved in the five years preceding the survey (see Table 4.15). Their children are older and are beginning to leave home; the parents may well begin to think more about their own convenience. In a growing urban area, fringe development alters the position of older neighborhoods in the overall scheme of land use and traffic patterns. The character of neighborhoods also changes as their residents age or move and are replaced by new households.

These factors should continue to be important for households in Stage 6, but added to them are the sharp decreases in both household size and income that are characteristic of this stage. Hence the increased emphasis at this point on changes in family circumstances and considerations of space and quality. Following the death of one spouse (Stage 7), the survivor is likely to be either physically or financially unable to maintain a single-family home, so involuntary moves are often reported.

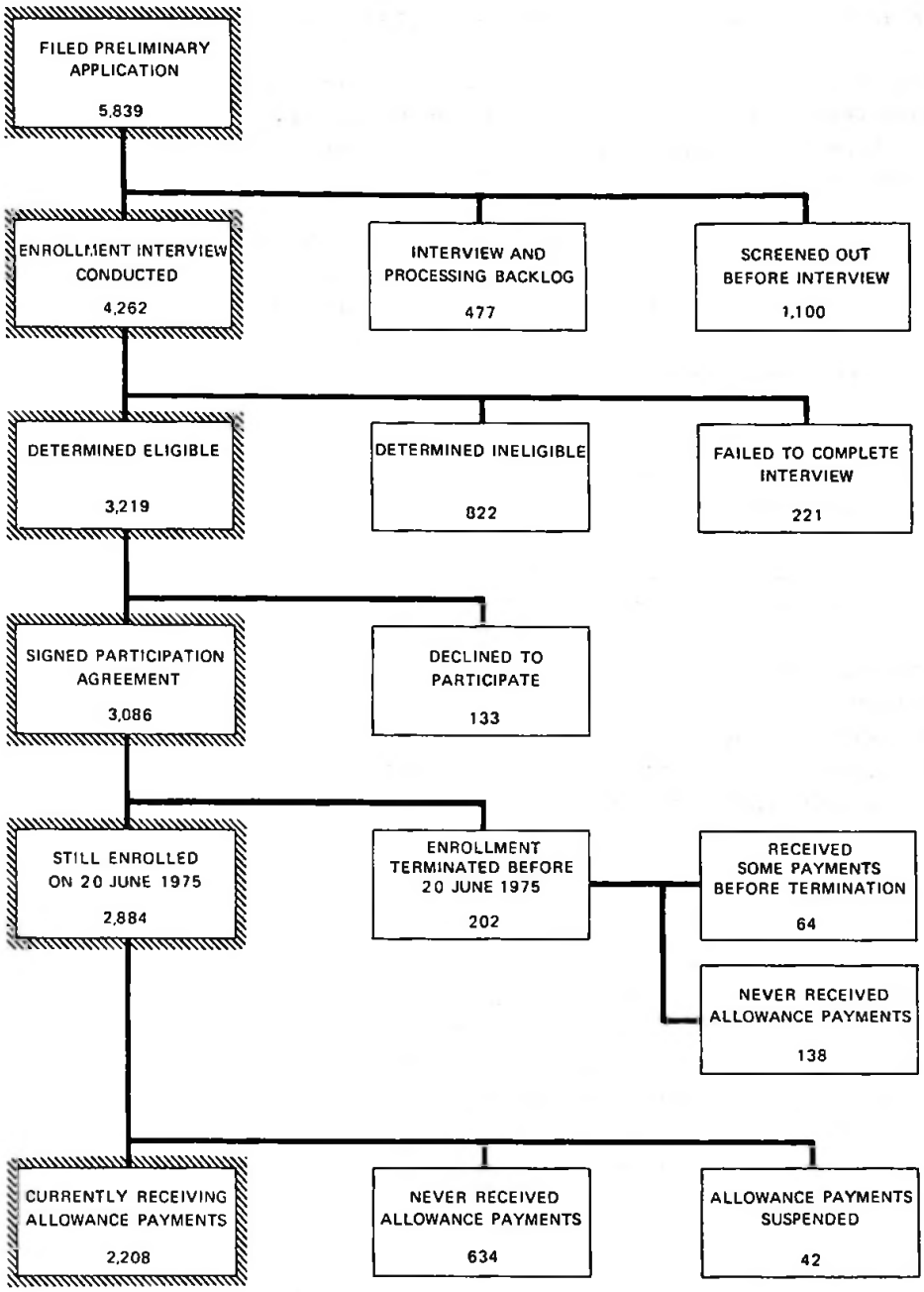
THE FIRST YEAR OF HOUSING ALLOWANCES

Section II of this report describes the activities of the Brown County HAO during the year ending 30 September 1975, including an account of households applying and enrolled during that period and the number receiving payments at the end of the period. Here, we report in more depth on the characteristics of clients and their housing. For this purpose, we have drawn on HAO records for the program's first year of operations, ending 20 June 1975.

On that date, the HAO had received 5,839 valid preliminary applications, whose disposition is detailed in Fig. 4.6. We are primarily interested here in the 3,086 households who were enrolled in the program at some time during its first year of operations. Another group of interest consists of the 2,208 households whose housing units had been evaluated and certified by the HAO and who were receiving monthly allowance payments at the close of the period.

Program Participation Rates

Although the HAO has made strenuous efforts to inform people in Brown Coun-



SOURCE: HAO records for Site I through 20 June 1975.

Fig. 4.6—Status of all preliminary applications filed during first year: Brown County housing allowance program, June 1975

ty about the benefits of the allowance program and the standards of eligibility, applications during the program's first year fell far short of exhausting the pool of eligible households.[10] The size of that pool continues to be a matter of considerable uncertainty, inasmuch as eligibility can only be thoroughly tested by an enrollment interview. Applying program standards as nearly as the data permit to households interviewed in the baseline survey of tenants and homeowners, conducted early in 1974, we conclude that there were then at least 8,000 eligible households in the county, excluding about 1,300 households who were already receiving housing assistance under other federal programs. However, the survey was not designed to sample all types of households in the county, so we are as yet able to account for only 7,600 of the estimated 8,000 eligibles not then living in subsidized housing.[11]

Table 4.19 compares the survey-based estimate of the number of eligible households with the number that actually enrolled during the first year. The table indicates that the program has appealed more to renters than to homeowners, regardless of their age; and to younger household heads more strongly than to older ones, regardless of housing tenure. The overall participation rate of 41 percent may be expected to increase during the program's second year, but experience with enrollments and terminations since the end of June[12] lead us to doubt that more than 60 percent of the eligible population will ever be enrolled at one time.

Table 4.20 shows the distribution of both eligible and enrolled households by life-cycle stage and tenure. The entries for all Stage 1 households and for renter households in Stage 9, which show more households enrolled than were estimated to be eligible, reflect the inadequacy of our eligibility data for these classes.[13] The highest participation rates shown are for young couples with older children (Stage 4) and single heads with children (Stage 8). The lowest rates are for older married couples (Stages 5 and 6).

The life-cycle classification of eligibles and enrollees sheds additional light on the differences in participation rates for homeowners and renters, noted in Table 4.19. First there appears to be more variation over life-cycle stages in the participation rates of homeowners than in those of renters. Second, eligible homeowners are concentrated in life-cycle stages with low participation rates, whereas eligible renters are concentrated in stages where participation is high. Thus, about 86 percent of the eligible owners and only 20 percent of the eligible renters are in life-cycle stages where participation rates are less than 40 percent.

Equally striking are the very high participation rates of young couples with older children (Stage 4). Among those in this stage who were enrolled, two-thirds had

[10] Administratively, the program was designed and budgeted for a two-year buildup to a maximum enrollment of 6,096 households. At the end of the first year, just over half that number had been enrolled, and 47 percent of that number were still enrolled.

[11] See pp. 80-81 for an account of excluded categories of households. Earlier estimates of the number of eligible households were based on cruder data from the September 1973 screening survey, which apparently underreported household incomes. From those data, we estimated that there were about 12,200 eligible households in Brown County, or roughly 150 percent of the number given here. See the *First Annual Report*, Table 8, for details of the earlier estimates.

[12] Annual recertifications of eligibility began in June 1975, leading to terminations of some households whose incomes had increased or whose family circumstances had altered.

[13] The discrepancy in Stage 1 is readily explained. Under program rules, childless single persons under 62 are eligible only if they are disabled or residentially displaced by some federal program. Neither of these circumstances was recorded in the survey of tenants and homeowners, so all childless single persons under 62 were counted as ineligibles.

The discrepancy among Stage 9 renter households reflects a sample size problem in this residual category. Only four survey cases are included in this category and of these four cases only one was determined to be eligible, a homeowner representing 25 households. The estimates for Stage 9 are thus subject to considerable sampling error.

Table 4.19

First-year Participation Rates, by Age of Household Head and Housing Tenure: Brown County Housing Allowance Program

Age of Oldest Household Head, by Housing Tenure	Number of Households		Participation Rate (%)
	Eligible[a]	Enrolled	
Homeowners			
Under 62 years	1,996	709	35.5
62 years or older	2,078	546	26.3
Total	4,074	1,255	30.8
Renters			
Under 62 years	2,382	1,368	57.4
62 years or older	1,147	462	40.3
Total	3,529	1,830	51.9
Homeowners and Renters			
Under 62 years	4,378	2,077	47.4
62 years or older	3,225	1,008	31.3
Total	7,603	3,085	40.6

SOURCE: Tabulations by HASE staff of records of the survey of tenants and homeowners, Site I, baseline; and HAO records for Site I through 20 June 1975.

NOTE: Program standards distinguish between households whose oldest head is under or over 62 years of age. Estimates of eligible households exclude those receiving assistance under other federal housing programs.

[a]Estimated from survey data.

three or more children and over a third had four or more children; these are the largest household sizes among enrollees in any life-cycle stage.

Figure 4.7 compares the incomes[14] of the 3,085 enrolled households with those of the 7,603 eligible households, separately for each household size distinguished for program purposes. Except for households consisting of a single person,[15] the enrolled households tend to come from the lower range of eligible incomes. The differences are especially striking for households with five or more members.

Many federal housing assistance programs have enrolled disproportionately large numbers of households with incomes near the upper limit for eligibility. We find it encouraging that the housing allowance program in Brown County has the opposite tendency, serving more of those in the lower part of the distribution of eligible incomes. Undoubtedly, one reason is that allowance entitlement declines as income increases, reaching zero at the upper limit of income eligibility. Those near that limit have little to gain by enrolling.[16]

[14] The figure shows interquartile ranges of adjusted gross income, as calculated by HASE staff for survey respondents and by HAO staff for program participants. Adjusted gross income consists of all cash income received by all household members, less certain deductions and exclusions specified by program rules. On average, adjusted gross income is about $1,000 less than gross income.

[15] To be eligible, a single person must be either at least 62 years old, or disabled, or residentially displaced by public action, and must have an adjusted gross income of less than $4,680. However, in classifying survey respondents, only those over 61 with incomes of less than $4,680 were counted as eligible.

[16] In fact, program rules do not permit a household to enroll if its allowance entitlement would be less than $10 per month; but once enrolled, a household can continue to participate as long as entitlement is greater than zero. As defined in this report, the eligible population excludes those whose monthly allowances would be less than $10.

Table 4.20

First-year Participation Rates, by Life-cycle Stage and Housing Tenure: Brown County Housing Allowance Program

Stage in Life Cycle[a]	Homeowners			Renters			Total		
	Number Eligible	Number Enrolled	Participation Rate (%)	Number Eligible	Number Enrolled	Participation Rate (%)	Number Eligible	Number Enrolled	Participation Rate (%)
1. Young single head, no children	--	9	(b)	--	75	(b)	--	84	(b)
2. Young couple, no children	23	18	(b)	288	103	35.8	311	121	39.5
3. Young couple, young children	853	283	33.2	832	417	50.1	1,685	700	41.5
4. Young couple, older children	118	88	74.6	98	49	50.0	216	137	63.4
5. Older couple, older children	456	61	13.4	90	21	23.3	546	82	15.0
6. Older couple, no children	1,078	198	18.4	317	99	31.2	1,395	297	21.3
7. Older single head, no children	1,113	397	35.7	900	471	52.3	2,013	868	43.1
8. Single head with children	407	192	47.2	1,004	592	59.0	1,411	784	55.6
9. All other	25	8	(b)	--	4	(b)	25	12	(b)
All stages	4,074	1,254	30.8	3,529	1,831	51.9	7,603	3,085	40.6

SOURCES: Tabulations by HASE staff of records of the survey of tenants and homeowners, Site I, baseline; and HAO records for Site I through 20 June 1975.

NOTE: Numbers of eligible households exclude those receiving assistance under other federal housing programs. Enrolled households are classified by life-cycle stage according to the ages and relationships of household members who are eligible for assistance; in 48 cases, the housing unit is shared with ineligible persons. Distributions of eligible households may not add exactly to totals because of rounding during estimation from sample data.

[a] See Table 4.8 for definitions of life-cycle stages.

[b] Not calculated because of inadequate data on numbers of eligible households.

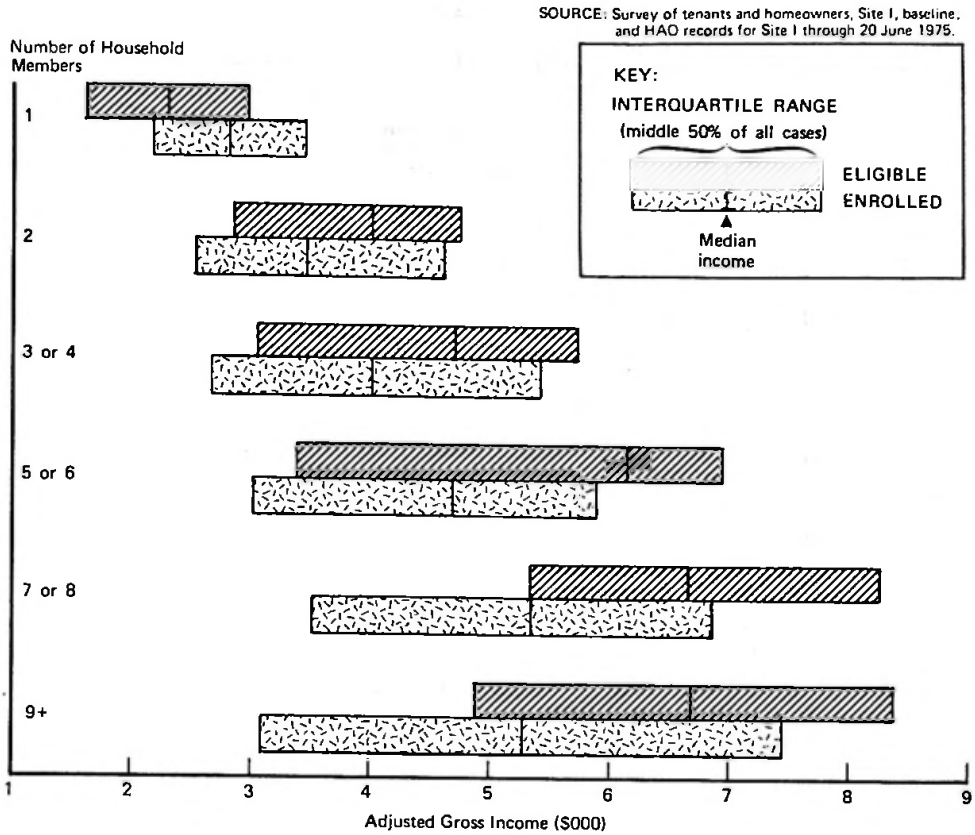


Fig. 4.7—Comparison of incomes reported by eligible and enrolled households: Brown County housing allowance program, first year

The allowance formula does not explain why income differences between those enrolled and all those eligible increase with household size. The median income for all two-person eligible households is about $4,000, rising to about $6,300 for six persons. Under existing program standards, households with these incomes could draw monthly allowances of $42 and $39 respectively—a difference that seems to us too small to suggest that the smaller household would have more incentive to enroll.

Allowance Entitlement and Housing Expenditures

Table 4.21 shows how 2,883 households still enrolled at the end of the program's first year were distributed by maximum monthly allowance entitlement. Separate distributions are shown for households grouped by size, and the column headings indicate the "standard cost of adequate housing" for each group. This figure is the maximum entitlement for a household with no income; maximum monthly entitlement decreases by one dollar for each four dollars of adjusted gross income.

Except for the small numbers of households composed of seven or more persons, each distribution is concentrated around an entitlement that is slightly under half the standard cost of adequate housing, but with some cases close to zero and others

Table 4.21

Percentage Distribution of Enrolled Households, by Monthly Allowance Entitlement and Household Size: Brown County Housing Allowance Program, June 1975

Maximum[a] Monthly Entitlement ($)	Size of Household and Standard Cost of Adequate Housing[b]						All Sizes
	1 Person $100	2 Persons $125	3-4 Persons $155	5-6 Persons $170	7-8 Persons $190	9+ Persons $220	
Under 10	--	0.5	2.4	2.7	0.1	--	1.2
10-19	5.6	8.7	6.3	6.4	2.3	1.7	6.4
20-29	11.2	10.7	6.2	8.4	6.3	3.3	8.8
30-39	19.7	11.4	6.9	4.4	4.7	6.7	11.2
40-49	30.5	11.1	6.5	6.0	14.1	3.3	14.6
50-59	17.6	13.9	8.7	5.0	7.0	3.3	11.9
60-69	7.8	22.2	8.8	7.0	7.0	5.0	11.2
70-79	3.8	7.3	12.7	11.0	3.9	3.3	8.2
80-89	1.7	4.6	15.4	20.4	6.3	6.7	8.9
90-99	0.7	2.5	7.7	5.0	9.4	3.3	4.2
100-109	1.6	1.0	4.2	5.7	7.8	11.7	3.2
110-119	--	1.0	3.7	1.7	7.0	5.0	2.0
120-129	--	4.9	2.1	2.7	2.3	6.7	2.3
130-139	--	--	1.1	2.0	3.1	8.3	0.9
140-149	--	--	0.8	1.7	2.3	6.7	0.7
150-159	--	--	6.5	2.3	2.3	3.3	2.5
160-169	--	--	--	1.0	2.3	1.7	0.2
170-179	--	--	--	6.7	0.1	--	0.7
180-190	--	--	--	--	3.9	1.7	0.2
190-199	--	--	--	--	6.3	--	0.3
200-209	--	--	--	--	--	1.7	0.0
210-219	--	--	--	--	--	5.0	0.1
220	--	--	--	--	--	11.7	0.2
All amounts	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Median amount ($)	44	55	73	79	86	113	57
Number of cases	816	675	905	299	128	60	2,883

SOURCE: Tabulations by HASE staff of HAO records for Site I through 20 June 1975.

NOTE: Entries exclude 202 households whose enrollments were terminated prior to 20 June 1975. Of those enrolled on that date, 77 percent were actually receiving payments.

[a] Maximum monthly entitlement is based on adjusted gross income and the standard cost of adequate housing. Monthly payments to those in certified housing may be less than the maximum entitlement if actual housing expenses are less, as sometimes occurs.

[b] Scheduled monthly cost of housing meeting program standards for a household of the indicated size, used in determining allowance entitlement.

at the maximum. The median entitlement for all enrolled households is about $57 per month, or $684 per year. This amount compares favorably with subsidies paid under other housing programs serving households in the same or even higher ranges of income.[17] What remains to be seen is whether a housing subsidy of this size is adequate to achieve program purposes.

Tables 4.22 and 4.23 cast some light on this issue, more for renters than for

[17] Comparisons are admittedly difficult. The most comprehensive recent analysis of benefits and government costs in existing programs indicates that the HAO in Site I serves a client population whose median gross income ($4,400) is far below the median for low-rent public housing (over $8,000), well below the medians for Sec. 235 ($6,500), and Sec. 236 ($5,300), but considerably higher than the median for the small Rent Supplements Program ($2,600). Yet the HAO's average annual direct subsidy of $684 is about the same as that of low-rent public housing ($702), lower than those of Sec. 235 ($948) and Sec. 236 ($907), and only 60 percent of that of the Rent Supplements Program ($1,133). See U.S. Department of Housing and Urban Development, *Housing in the Seventies: A Report of the National Housing Policy Review*, U.S. Government Printing Office, Washington, D.C., 1974, Tables 4, 14, 17, 23, and 30.

Table 4.22

Percentage Distribution of Renter Households Living in Certified Units, by Monthly Housing Expenses and Household Size: Brown County Housing Allowance Program, June 1975

Monthly Housing Expenses[a]	Size of Household and Standard Cost of Adequate Housing[b]						All Sizes
	1 Person $100	2 Persons $125	3-4 Persons $155	5-6 Persons $170	7-8 Persons $190	9+ Persons $220	
Under 49	2.5	--	0.2	--	--	--	0.8
50-59	4.1	0.3	0.2	--	--	--	1.5
60-69	3.3	0.3	--	--	--	--	1.1
70-79	6.0	1.3	0.2	--	--	--	2.2
80-89	9.6	1.6	0.2	--	--	--	3.3
90-99	9.1	5.2	0.7	--	--	--	4.2
100-109	9.3	3.6	1.4	--	4.2	--	4.2
110-124	19.2	10.8	4.5	2.5	4.2	--	10.3
125-139	11.3	12.1	11.5	10.0	12.5	11.1	11.6
140-154	14.3	22.0	12.2	8.8	4.2	11.1	14.9
155-169	7.1	13.4	21.2	11.3	20.8	11.1	14.4
170-189	2.7	19.3	25.0	20.0	4.2	22.2	16.3
190-209	1.1	6.2	13.7	7.5	12.5	11.1	7.7
210-219	0.3	1.9	2.5	3.8	20.8	11.1	2.2
220-229	--	0.3	2.0	10.0	--	11.1	1.6
230-249	--	0.7	2.5	11.3	--	--	1.8
250 or more	--	0.7	2.0	15.0	16.7	11.1	2.3
All amounts	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Median amount ($)	112	150	168	188	190	185	151
Number of cases	364	305	444	80	24	9	1,226

SOURCE: Tabulations by HASE staff of HAO records for Site I through 20 June 1975.

NOTE: Entries are based on records for all enrolled renters living in certified units and receiving allowance payments in June 1975.

[a] Current contract rent plus standard allowances for fuel and utilities not included in contract rent.

[b] Scheduled monthly cost of housing meeting program standards for a household of the indicated size, used in determining allowance entitlement.

homeowners. The tables show approximately how much those who were actually receiving payments spent for their housing.

As calculated by the HAO, monthly housing expenses for renters (Table 4.22) consist of contract rent plus standard allowances for fuel and utilities, if these are not included in contract rent. These explicit payments account in principle for the full cost of a renter's housing.

For homeowners, the allowable monthly housing expenses (Table 4.23) include mortgage interest payments, real estate taxes (prorated over twelve months), and standard allowances for property insurance, maintenance, fuel, and utility services. These items exhaust neither out-of-pocket expenses nor full housing costs. The excluded out-of-pocket expense is the monthly payment of mortgage principal. The excluded housing costs are depreciation of capital improvements and imputed interest on the homeowner's equity.

The different methods of accounting for renter and homeowner housing expenses explain why the latter are so much lower than the former. The point is

Table 4.23

Percentage Distribution of Homeowner Households Living in Certified Units, by Monthly Housing Expenses and Household Size: Brown County Housing Allowance Program, June 1975

Monthly Housing Expenses[a]	Size of Household and Standard Cost of Adequate Housing[b]						All Sizes
	1 Person $100	2 Persons $125	3-4 Persons $155	5-6 Persons $170	7-8 Persons $190	9+ Persons $220	
Under 49	0.3	--	--	--	--	--	0.1
50-59	5.1	3.9	0.4	--	--	--	2.5
60-69	15.1	16.5	2.8	--	1.8	--	9.1
70-79	30.9	22.8	5.6	2.3	1.8	3.4	16.5
80-89	24.1	15.5	6.0	2.3	5.3	10.3	13.3
90-99	9.3	9.7	3.2	2.3	3.5	3.4	6.5
100-109	7.7	9.7	8.0	11.7	1.8	--	8.1
110-124	3.2	5.8	8.0	8.6	12.3	17.2	6.6
125-139	1.9	1.9	10.8	7.0	17.5	20.7	6.3
140-154	0.3	4.9	9.2	14.1	12.3	6.9	6.2
155-169	1.3	3.4	6.8	8.6	14.0	6.9	5.0
170-189	--	2.9	14.7	13.3	1.8	10.3	6.5
190-209	0.6	2.4	6.8	10.9	7.0	17.2	4.8
210-219	--	--	4.0	3.9	1.8	--	1.6
220-229	--	--	3.2	3.1	1.8	--	1.3
230-249	--	0.5	5.6	1.6	3.5	--	1.9
250 or more	--	--	5.2	10.2	14.0	3.4	3.6
All amounts	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Median amount ($)	80	84	148	158	148	136	102
Number of cases	312	206	251	128	57	29	983

SOURCE: Tabulations by HASE staff of HAO records for Site I through 20 June 1975.

NOTE: Entries are based on records for all enrolled homeowners living in certified units and receiving allowance payments in June 1975.

[a] Monthly mortgage interest payments for mortgaged properties, real estate taxes and special assessments, and standard allowances for insurance, maintenance, fuel, and utilities.

[b] Scheduled monthly cost of housing meeting program standards for a household of the indicated size, used in determining allowance entitlement.

important because a household's monthly allowance payments are equal to its maximum monthly entitlement or its monthly housing expenses, whichever is smaller.[18]

Since the housing expenses of renters, as calculated by the HAO, are so much better as estimates of full housing costs, the following discussion is based only on the data shown in Table 4.22 for renters.

If certifiable housing units with rents close to the program's standard costs were plentiful, and if program participants sought the least expensive certifiable housing available, we should expect to find housing expenditures tightly and symmetrically clustered about the standard cost for each household size. What we find in fact are wide distributions whose median values exceed standard costs by 10 to 20 percent. About a third of all those receiving payments have found certifiable units whose costs are less than the standard amount, so we know that such housing exists. At least some of the others clearly have chosen to supplement their allowances with more than a fourth of their income in order to obtain housing of better quality.[19]

[18] At the end of June 1975, 9.3 percent of all homeowners receiving payments were getting less than their maximum entitlement, as compared with 4.4 percent of all renters.

[19] It is important to note that nearly 90 percent of these renters were occupying units that they selected *before* they enrolled in the allowance program and that their contract rents seldom changed after enrollment (see Table 4.24, below). The dispersion of rents paid by allowance recipients therefore does not reflect any effect of the program on participants' housing expenditures.

But it may also be that the program's schedule of standard costs is obsolete because of inflation in housing costs since it was promulgated.[20]

Although rents, home prices, and fuel and utility costs all undoubtedly increased during 1974 and the first half of 1975, there is no evidence that the allowance program contributed significantly to housing price inflation. Those most likely to be the agents of allowance-induced inflation are renters participating in the program, who might bid up the rents of certifiable housing or whose landlords might raise the rents on their units when they enroll. Yet their contract rents were remarkably stable during the program's first year.

Table 4.24 summarizes the evidence. It deals with all renters who were living in certified housing at the end of the program's first year, divided into those who were still in their preenrollment units and those who had moved. Among the nonmovers, nearly 80 percent were paying no more contract rent than when they enrolled, despite the fact that the homes of 37 percent initially failed evaluation and had to be repaired before they could be certified. In fact, the incidence of rent increases was somewhat lower for these failed units than for those that passed their first evaluation.

Most movers did pay more, especially ones who moved from an uncertifiable to a certifiable housing unit. However, paying more rent for better housing does not indicate price inflation but, rather, a higher standard of housing consumption made possible by the allowance. The few who moved from one certifiable unit to another also usually paid more for the new unit, but a fourth of them actually paid less.

The table also segregates a small but interesting group—23 households who were living rent free at the time of enrollment but who subsequently either began to pay rent on that unit (6 cases) or moved to another where they paid rent (17 cases). In these cases, the allowance apparently reduced dependence on families or friends who owned the preenrollment housing units—two-thirds of which failed their initial evaluations.

Table 4.25 reports in more detail on rent increases, excluding the increases from zero discussed in the paragraph above. Altogether, there were 309 cases of rent increases, of which 92 were associated with moves. For nonmovers, the median increase was about 9 percent; for movers, about 38 percent. The smallest increases were for nonmovers whose preenrollment housing passed its initial evaluation; only about a fifth of them reported increases in contract rent, and for this group, the median increase was 8 percent.

Finding Certifiable Housing

The intent of the housing allowance program is to enable participants to afford decent, safe, and sanitary housing. A condition of assistance is that they actually occupy such housing.

To ensure that this condition is met, the HAO evaluates each housing unit proposed for occupancy by a participating household, taking into account both the characteristics of the unit and the characteristics of the household. To be certifiable for a given household, the proposed unit must meet the following conditions:

[20] That schedule is based on an analysis of rents paid in Brown County in September 1973 for housing that met program standards of quality. The housing expense data reported above are for the end of June 1975, about twenty-one months later.

Table 4.24

Distribution of First-year Changes in Contract Rent for Nonmovers and Movers, by Results of Initial Housing Evaluation: Brown County Housing Allowance Program

Change in Contract Rent, Enrollment to Year's End	Distributions of Nonmovers (%)			Distributions of Movers (%)			Total in Certified Units at Year's End
	First Evaluation of Preenrollment Unit		All Nonmovers	First Evaluation of Preenrollment Unit		All Movers	
	Pass	Fail		Pass	Fail		
Decrease	2.5	2.0	2.3	25.8	8.8	12.5	3.5
No change	74.9	81.0	77.2	9.7	12.4	11.8	69.5
Increase from zero[a]	.4	.8	.6	16.1	10.6	11.8	1.9
Other increase	22.2	16.2	20.0	48.4	68.1	63.9	25.1
All cases	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of cases	685	401	1,086	31	113	144	1,230

SOURCE: Tabulations by HASE staff of HAO records for Site I, 19 June 1974 through 20 June 1975.

NOTE: Data base consists of 1,230 renter households living in certified units at the end of the program's first year, out of 1,691 then enrolled.

[a]At the time of enrollment, these households were living rent free in housing units owned by someone not a member of the household.

Table 4.25

Distribution of First-year Increases in Contract Rent for Nonmovers and Movers, by Results of Initial Housing Evaluation: Brown County Housing Allowance Program

Percentage Increase in Contract Rent	Distributions of Nonmovers (%)			Distributions of Movers (%)			Total with Rent Increases
	First Evaluation of Preenrollment Unit		All Nonmovers with Rent Increases	First Evaluation of Preenrollment Unit		All Movers with Rent Increases	
	Pass	Fail		Pass	Fail		
1-4	30.0	9.2	24.0	6.7	7.8	7.6	19.1
5-9	32.9	26.1	30.9	13.3	5.2	6.5	23.6
10-14	10.5	20.0	13.4	6.7	3.9	4.4	10.7
15-24	12.5	13.8	12.9	6.7	14.3	13.0	12.9
25-49	10.5	20.0	13.4	40.0	36.4	37.0	20.4
50-74	.7	7.7	2.8	20.0	24.7	23.9	9.1
75-99	2.6	3.1	2.8	6.7	7.8	7.6	4.2
All increases	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Median increase (%)	8.0	13.7	9.2	35.4	37.9	37.5	9.7
Number of cases	152	65	217	15	77	92	309

SOURCE: Tabulations by HASE staff of HAO records for Site I through 20 June 1975.

NOTE: Data base consists of 309 renter households living in certified units at the end of the program's first year whose contract rents at that time were greater than at the time of enrollment, but excluding 23 households who were living rent free at the time of enrollment. See Table 4.24 for an account of households whose rents did not increase between enrollment and the end of the period.

- Have adequate living space for a household of that size.
- Have adequate bathroom, kitchen, heating, and electrical facilities.
- Have adequate natural light and ventilation.
- Be free from conditions that endanger the health or safety of the occupants.

Trained evaluators visit each unit and prepare a detailed report of its deficiencies, including an overall pass-or-fail rating. The standards generally follow local housing codes, but are not as demanding on all items. Housing codes usually call for "good-as-new" condition, but the HAO will accept minor shortcomings that do not endanger the health or safety of the occupants.

Following each evaluation, the findings are reported to the client. If the unit fails certification (either because of intrinsic defects or because it is too small for the client's household), the client may seek to remedy the defects noted or may ask the HAO to evaluate a different unit. Some do neither, preferring to forego allowance payments.

For homeowners, correcting defects is usually the only feasible way to qualify for payments. Renters who follow that route ordinarily ask their landlord or prospective landlord to make the necessary repairs, although they sometimes undertake the work themselves. The HAO does not deal directly with the landlords except as necessary to explain what must be done to remedy noted defects. At the client's request, a unit will be reevaluated by the HAO to determine whether repairs have made it certifiable.

A client who plans to move may request evaluations of any number of housing units in his search for one that meets both program standards and his own preferences. Certified units whose occupants are receiving payments are reevaluated annually to test their continued conformance to program standards; payments may be suspended if a unit fails reevaluation and is not repaired within a reasonable time thereafter.

In order to provide data for program analysis, the HAO has been instructed to evaluate the housing unit occupied by each client at the time of his enrollment, even though the client plans to move immediately to other quarters. For various practical reasons, this is not always done; but during the first year of program operations, evaluation reports were filed for 90 percent of all preenrollment housing units.

As shown in Table 4.26, the HAO completed 4,009 housing evaluations during the program's first year, an average of 1.3 per household ever enrolled. Evaluations of preenrollment units dominate, accounting for two-thirds of all evaluations and 88 percent of all initial evaluations. The next largest category is reevaluations of failed units, accounting for a fifth of the total. Initial evaluations, whether of preenrollment or other units, failed 40 to 46 percent of the units evaluated. Only a few annual reevaluations were conducted toward the end of the first year, but there were enough failures to indicate that periodic reevaluations are needed to enforce program standards. The negligible failure rate on reevaluations of failed units indicates that the HAO has been extraordinarily successful in explaining to clients what must be done to correct defects noted on initial evaluations.

Table 4.27 lists the main reasons for failing housing units on their initial evaluations. Over 39 percent of the failure ratings related to problems with stairs and handrails—hazards that can usually be remedied by an amateur carpenter with a few dollars' worth of lumber. Other hazardous conditions accounted for 13 percent

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Table 4.26

Distribution of First-year Housing Evaluations, by Type of Evaluation and Result of Evaluation: Brown County Housing Allowance Program

Type of Evaluation	Evaluations Completed[a]		Percentage Distribution by Evaluation Result		
	Number	Percent	Pass	Fail[b]	Total
Initial Evaluation					
Preenrollment unit	2,706	67.5	54.4	45.6	100.0
Other unit	359	8.9	59.9	40.1	100.0
Total initial	3,065	76.4	57.2	42.9	100.0
Reevaluation					
Annual	60	1.5	80.0	20.0	100.0
Failed unit	884	22.1	99.0	1.0	100.0
Total reevaluations	944	23.6	89.5	10.5	100.0
All types	4,009	100.0	73.3	26.7	100.0

SOURCE: Tabulations by HASE staff of HAO records for Site I through 20 June 1975.

[a]All evaluations completed during the program's first year of operations.

[b]Failures do not include units that were otherwise acceptable but were too small for the applicant's household.

of the failure ratings, most of them being structural problems that would be costly to correct.

Problems with light and ventilation, including broken or unscreened windows, accounted for 19 percent of the failure ratings. Inadequate ventilation of kitchens was especially frequent and would usually be troublesome to remedy, requiring installation of an openable window or an exhaust fan.

A number of units failed because they lacked hot and cold running water in their kitchens or bathrooms, usually for lack of a functioning water heater. These items together account for nearly 16 percent of all failure ratings, with considerable redundancy among them.

Finally, 6 percent of the failure ratings related to the absence of any habitable sleeping rooms in the unit. (A habitable sleeping room must have certain minimum dimensions and adequate light, ventilation, and privacy.) This category of failure ratings does not include units that would be certifiable for some households but not for other, larger ones.

The failures listed in Table 4.27 all pertain to defects in the housing unit. In addition, 161 units that were otherwise acceptable were found to be too small for the applicant's household.[21] These cases are not included as failures in the distributions by evaluation result given in Table 4.26. They account for 5.6 percent of all failures.

Figure 4.8 traces the experiences of enrolled households in finding a certifiable housing unit and thus qualifying for monthly allowance payments.[22] At the end of

[21] Program standards require one habitable bedroom for every two persons, plus a separate livingroom for households of three or more persons.

[22] Payment authorization entails a satisfactory housing evaluation report, and for renters, submission of a lease agreement with the landlord. Except for a few terms required by Sec. 23 regulations, the form and content of the lease is left to the landlord and the tenant.

Table 4.27

Distribution of Reasons Why Housing Units Failed Their Initial Evaluations: Brown County Housing Allowance Program, First Year

Reason for Failure	Frequency of Occurrence	
	Number	Percent
Hazardous Conditions		
Stairs or railings absent or unsafe	1,063	39.4
Hazardous conditions in kitchen or bath[a]	69	2.6
Unsanitary conditions or unsafe storage of hazardous materials	57	2.1
Walls structurally unsound or in need of repainting[b]	53	2.0
Exterior doors missing or broken	36	1.3
Ceilings structurally unsound or in need of repainting[b]	26	1.0
Floors structurally unsound or water-permeable[c]	25	.9
Foundation structurally unsound or water-permeable	22	.8
Fire exits inadequate for safety	18	.7
Roof structurally unsound or leaky	17	.6
Accessory structures near house unsafe	16	.6
Inadequate storm drainage, seepage, erosion	3	.1
Group total	1,405	52.1
Light and Ventilation		
Inadequate ventilation in kitchen or bath	277	10.3
Windows or screens damaged or missing	207	7.7
Inadequate ceiling height in kitchen	22	.8
Inadequate natural light in kitchen	3	.1
Overgrown bushes or trees block natural light	2	.1
Group total	511	18.9
Kitchen Facilities		
Hot-and-cold sink absent or inoperable	62	2.3
Cooking range absent or inoperable	23	.8
Refrigerator absent or inoperable	15	.6
Group total	100	3.7
Bathroom Facilities		
Hot-and-cold bath absent or inoperable	41	1.5
Hot-and-cold sink absent or inoperable	53	2.0
Flush toilet absent or inoperable	26	1.0
No heat in bathroom	17	.6
Inadequate enclosure for privacy	22	.8
Group total	159	5.9
Utility Systems		
Water heater absent or inoperable	179	6.6
Heating system inadequate or unsafe	57	2.1
No running water or inadequate plumbing	53	2.0
Too few or inoperable electrical outlets[d]	23	.8
No electrical service or unsafe wiring	31	1.2
Group total	343	12.7
Habitability		
No habitable sleeping rooms	178	6.6
All reasons	2,696	100.0

SOURCE: Tabulation by HASE staff of HAO records for Site I through 20 June 1975.

NOTE: Frequencies are based on records for 1,234 units that failed their initial housing evaluations during the program's first year. These do not include 161 units that were otherwise acceptable but too small for the applicant's household and 86 records that had not been processed as of 20 June 1975. Total frequency of reasons for failure is larger because some units failed for two or more reasons. A general deficiency sometimes results in several specific failure ratings. Percentage distributions may not always add exactly to subtotals or totals because of rounding.

[a] Gas leakage, electrical shock hazard, undrained water leakage, fire hazard, no sewage connection.

[b] Repainting required because of flaking lead-based paint.

[c] Floors in kitchen and bathrooms must be impermeable.

[d] Two convenience outlets required for kitchen, one for bath.

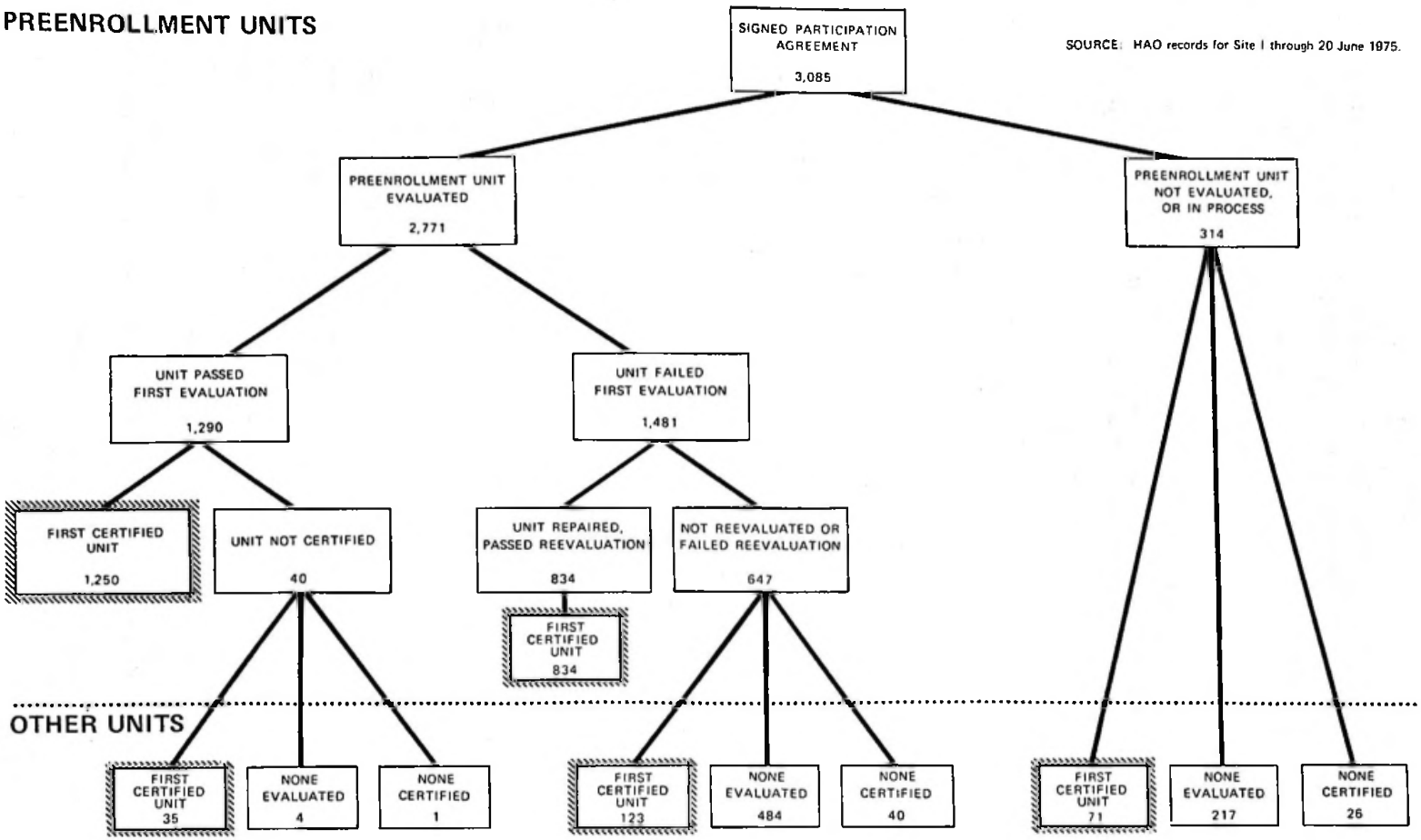


Fig. 4.8—Experience with housing unit certification: Brown County housing allowance program, first year

the program's first year, at least one housing unit has been certified for occupancy for each of 2,313 households, 75 percent of all those who enrolled during the period.

Over 90 percent of those who obtained certified units did so without moving. In 1,250 cases, the preenrollment unit passed its initial evaluation and was certified for occupancy without further ado. Of the 1,481 units that failed their initial evaluation, 834 (56 percent) were repaired, reevaluated, and certified for occupancy.

There were 229 clients who either chose to move or had to in order to obtain certifiable units. The two circumstances cannot be clearly distinguished in the data; for instance, a household whose preenrollment unit failed its initial evaluation may have planned to move anyway. Perhaps more to the point, at the end of the year there were 634 enrolled households who had not found certifiable units. Of these, 437 were renters and 197 were homeowners.

It should be noted that some of those who had not found certifiable units had not been looking for long. About 10 percent of them had been enrolled for less than a month and 20 percent for less than two months. There is no evidence that later enrollees had more difficulty than early enrollees in finding certifiable housing. In fact, the median elapsed time from signing the participation agreement to receiving the first payment was 28 days for those who signed the agreement before 1 January 1975 and 23 days for those who signed after that date.

Since February 1975, the HAO's housing evaluation section has maintained a log of repairs made to housing units that failed their initial evaluations, then were repaired and reevaluated. During the following eight months (through September 1975), 939 separate repair actions were logged, usually more than one being reported for a given unit.

Thirty-seven percent of these repair actions entailed the installation or repair of handrails, noted earlier as the leading cause of failure ratings on initial evaluations. Another 17 percent of the repair actions entailed installation or repair of window panes or frames, including cases in which a window needed for ventilation had been accidentally or deliberately sealed shut. About 10 percent of the repair actions involved installing or repairing vents for furnaces, water heaters, clothes dryers, and fireplaces. Thirty-eight cases of major repairs or improvements were reported; these included such measures as enlarging bedrooms, installing new electrical systems, repairing foundations, and installing new water heaters. As reported by the clients, the median cost of materials for all repairs was about $8.50 per housing unit; but because of the occasional cases of major repairs or improvements, the average cost was much higher—$36.75. Labor costs were not reported.

First-year Program Evaluation

The data presented above lead to several general conclusions about the effects of the allowance program during its first year of operations, including its effects on both participants and the local housing market. These are discussed below.

Effects on Program Participants. During its first year, the allowance program succeeded in enrolling about 40 percent of those estimated to be eligible to participate under existing program standards. Although the HAO has an obligation to inform all eligibles about the program and its benefits, there is no enrollment target; one purpose of the experiment is to discover how many of those who have the opportunity to enroll choose to do so. Outreach continues, and at the end of

September 1975, about 44 percent of those estimated to be eligible had been enrolled in the program.

Eligible renters have been more interested in the program than eligible homeowners, partly because their family circumstances seem to entail greater budgetary stresses. However, homeowners—and particularly elderly homeowners—have been wary of the lease-leaseback agreement that was required in order to provide them with "rent assistance" under Sec. 23 of the U.S. Housing Act of 1937. Recent changes in the law (the Housing and Urban Development Act of 1974) have enabled HUD to eliminate this provision, and program rules were altered early in October 1975 so that homeowner participants can receive payments without entering into any agreement that might appear to be a cloud on the title to their home. It is too soon to tell whether this change will result in a substantial increase in homeowner enrollments.

Although the full spectrum of eligibles is represented among those enrolled, the program is most attractive to those with lower incomes and larger allowance entitlements. Even so, the median allowance payment is under $60 per month, much less than the typical transfer payment under other federal housing assistance programs. This payment typically covers less than half the recipient's total housing expenses.

For most recipients, the payment has replaced prior expenditures from nonallowance income, rather than being reflected in increased expenditures for better housing. This has been possible because they already lived in housing that met program standards, but their preenrollment housing expenses exceeded a fourth of their adjusted gross incomes. The allowance, in other words, has enabled them to maintain an adequate standard of housing consumption with less strain on their budgets for other goods and services.

However, about a fourth of all those enrolled have caused their preenrollment units to be repaired or improved so that they could qualify for allowance payments. These include about 401 renters and 433 homeowners. It is especially striking that few of the renters whose dwellings were repaired had reported rent increases by the end of the program's first year.

Only 7 percent of those enrolled during the first year had moved from their preenrollment units by the year's end. These were nearly all renters, and about three-fourths of them moved from a preenrollment unit that failed its initial evaluation. The movers paid considerably higher rents in their new units than in their old ones, presumably because the new units were larger or of better quality.

Effects on the Local Housing Market. Although the experimental housing allowance program enrolled over 3,000 households in its first year and paid out $736,000 in housing allowances, its effects on the local housing market have been hardly visible. Although tenants, homeowners, landlords, and lenders are generally aware of the program, and many have either communicated directly with the HAO or referred others to it, we are unable to perceive any significant disturbance of preprogram market patterns. Given the common concern among housing experts that a fullscale allowance program might set in motion a variety of adverse market consequences—rent inflation, speculation in real estate, neighborhood turnover, home improvement frauds—this is an extremely important if necessarily tentative finding.

To be sure, Brown County has not been exempt from national inflationary pressures, but these have been reflected mostly in escalating costs for fuel and utility

services. Landlords have rarely raised rents in response to the knowledge that their tenants were receiving housing allowances, even when they were asked to make repairs needed for certifiability. There have been a few cases in which a tenant's request for a year's lease prompted a small rent increase, not unreasonable in an inflationary economy.

The amount of housing improvement achieved during the first year was modest, partly because Brown County's housing stock was already in fairly good condition. Out of 1,481 housing units that failed their first evaluations, 834 subsequently were repaired, reevaluated, and passed. Most of these had only minor problems, such as defective handrails, windows, or heating vents.

At the end of the program's first year, only 229 enrollees had moved from their preenrollment units and only 128 had moved from their preenrollment neighborhoods. Manifestly, the moves to date are too few to have disturbed the neighborhoods of origin or destination. The high incidence of program participants whose preenrollment units were certified either before or after being repaired suggests that the program in Brown County is unlikely to result in neighborhood turnover. Instead, by enabling homeowners and renters to stay where they are and to maintain their homes adequately, the program is more likely to stabilize neighborhoods.

V. PRELIMINARY FINDINGS: ST. JOSEPH COUNTY, INDIANA

Because the key events of the Supply Experiment in Site II lag behind those in Site I by nine months to a year, we have much less to report about St. Joseph than about Brown County.

The screening survey of households and housing units, conducted in July and August of 1974, is the only primary data base for St. Joseph County that has yet been audited and analyzed by HASE staff. The baseline surveys, conducted from November 1974 through June 1975, gathered large volumes of data about landlords, tenants, homeowners, residential properties, and neighborhoods, but these data are only now emerging from the lengthy process of coding, keypunching, and cleaning that necessarily precedes analysis.

The allowance program has been in operation for nine months, but we do not plan to integrate its administrative records into analyzable research files until the end of the program's first year. In the meantime, we depend on monthly management information reports (MIRs) prepared by the HAO; they provide a plethora of administrative statistics but relatively little information about clients and their housing.

In the pages that follow, we draw primarily on the screening survey data and the monthly MIRs to provide the reader with a few but important early findings about St. Joseph County's housing market, the population it serves, and the characteristics of those who have applied to or enrolled in the housing allowance program.

MAJOR FINDINGS

St. Joseph County was selected as the second site for the Supply Experiment because its housing market appeared to contrast appropriately with Brown County's. For Site II, we sought a metropolitan area whose central city was decreasing in population or, at most, growing very slowly; and one where racial minorities formed a substantial fraction of the central-city population. Associated with these characteristics we expected to find a surplus of older, deteriorating housing in the central city, a concentration there of low-income households, a racially segregated housing market, and a ring of more prosperous all-white suburbs.

In choosing St. Joseph County, we were guided primarily by data from the 1970 Census of Population and Housing, and secondarily by what we could glean from site visits and local planning studies.[1] The screening survey conducted in July and August of 1974 provided the first opportunity to check and update our census-based conclusions about the characteristics of the housing stock, the characteristics of the population, and current housing-market conditions.

[1] See the *First Annual Report*, pp. 40-47, for a summary of our impressions and the supporting data.

The Housing Market in 1974

We find that the housing-market characteristics that led to St. Joseph County's selection as Site II of the experiment were correctly understood when the decision was made and that trends reflected in the last two decennial censuses continued through 1974.

- *The number of households in South Bend continued to decrease between 1970 and 1974. Elsewhere in the county, the number grew slightly. Since 1960, South Bend has lost about 3,200 households.*
- *South Bend still contains 96 percent of the county's black households. They composed 13 percent of the central city's households in 1974, up from 11 percent in 1970. The Chicano minority remained small throughout the county.*
- *South Bend's rental vacancy rate remained high—over 8 percent. A new development since 1970 is an increase in rental vacancies elsewhere in the county, especially in Mishawaka, a city of 13,000 households that adjoins South Bend.*
- *The data suggest that single-family houses in South Bend are shifting from owner-occupancy to rental status, a characteristic of oversupplied housing markets.*
- *Tests of housing quality applied in the screening survey indicate that 25 percent of all rental units and 9 percent of all homeowner units would fail the HAO's certification standards.*

The Housing Allowance Program in 1974

The housing allowance program in Site II is still in a formative stage, with only nine months of operating experience and only six months of open enrollment at the end of September 1975. However, it is already clear that the program is developing along different lines than in Brown County.

- *Enrollment has been faster in St. Joseph County, reaching 2,000 households in six months (vs. eight months for Brown County). Part of the reason is that administrative techniques developed in Site I were transferred to Site II, easing startup problems. But the difference is also due to greater public interest in the program. Applications received in Site II during the first six months exceeded by 87 percent those received during the comparable period in Site I.*
- *Even though enrollment was restricted during this period to residents of South Bend, where over 40 percent of all housing units are rentals, homeowners predominate among both applicants and enrollees. In Brown County, 60 percent of those enrolled are renters.*
- *About 45 percent of those enrolling in the first six months were black and 3 percent were Chicanos. The reason is partly that enrollment was restricted to South Bend, where nearly all the county's blacks and Chicanos live; and partly that these minorities account for a large fraction of the county's low-income population. About 18 percent of all black and Chicano households in South Bend have enrolled in the program. In Brown County,*

where minority populations are small, the minority enrollment in the program is insignificant.

- *Even though income distributions in Brown and St. Joseph counties are similar, the incomes of those enrolling are remarkably different. The median for enrollees in Brown County is about $3,500; for St. Joseph County, the median is about $2,700. Allowance payments are correspondingly larger in the second site, averaging about $70 per month, vs. $57 in Site I.*
- *The housing units occupied by those who have so far enrolled are generally in worse condition than was true during the corresponding period in Brown County. Sixty-four percent have failed their initial evaluations, as compared with 43 percent in Brown County.*

Below, we report on both the housing market and the allowance program, giving the statistical basis and technical qualifications for the findings summarized above.

THE HOUSING MARKET IN 1974

As noted above, the screening survey conducted in July and August of 1974 provided the first opportunity to check and update our census-based conclusions about the characteristics of the housing stock, the characteristics of the population, and current housing-market conditions.

As befit its purposes, the screening survey entailed only very brief interviews with household heads, and consequently provides data on only the most easily reported features of a respondent's household and housing unit. This limitation was compounded by another, the relatively low field completion rate of the survey: Out of nearly 10,000 scheduled interviews, only 6,066 were completed.[2] It was therefore necessary to review the data carefully for evidence of nonresponse bias before concluding that respondents were a representative sample of all households, and that their housing units were representative of all housing units.

Our audit of the screening survey file, completed but not yet published, compares households that completed their interviews with those that refused; compares housing units occupied by respondents with those occupied by households who refused to be interviewed or could not be contacted; and compares vacant with occupied units. We also conducted a special sample survey to determine how many "nonresidential" properties that were excluded from the screening survey sampling frame were actually in residential use. Finally, we compared population estimates made from survey data with corresponding enumerations from the 1970 Census of Population and Housing, updated as well as possible from local registers of building and demolition permits and from data provided by local utility companies.

At this time, we believe we understand most of the limitations of our screening survey data and can use them to make generally reliable estimates of the numbers and basic characteristics of residential properties, housing units, and households in St. Joseph County. However, we expect the baseline surveys to provide better information about details of tenure and occupancy status, possibly requiring some of the data reported here to be corrected.

[2] See Sec. III for details.

The Housing Stock

In August 1974, there were about 69,000 residential properties in St. Joseph County with more than 83,000 housing units on them. Table 5.1 describes all but 2,700 single-family properties that escaped our sampling system.[3]

Single-family homes accounted for 95 percent of all residential properties and 78 percent of all housing units in the county. At the time of the survey, about 55,000 single-family homes were owner-occupied, about 5,800 were renter-occupied, and nearly 2,300 were vacant. In Table 5.1 we have listed the vacant single-family houses separately because their intended uses as ownership or rental properties are often unclear.

Twenty-two percent of all housing units were on multiunit properties. Small properties were the most numerous, typically consisting of one unit occupied by the property owner and one to three rental units. The larger properties included conventional apartment houses, public housing projects, and clusters of townhouses or garden apartments in low-rise buildings. Five were cooperatives planned for owner-occupancy, but one of these has some rental units. There were 28 properties with over 100 units, the largest having more than 700 units.

Finally, there were 17 mobile home parks in the county, with nearly 1,900 mobile homes on them. Typically, a mobile home is owned by its occupants but occupies space rented from the owner of the park, who also provides utility connections and some common facilities.

Subsidized Housing

During the last 30 years, both South Bend and Mishawaka have participated in a number of federal housing subsidy programs. Table 5.2 describes the inventory of subsidized housing as of August 1974. It includes 13 low-rent public housing projects, some of which consist of scattered units owned or leased by public authorities, and some of which are developments of 50 to 250 publicly owned units; 2 privately owned rental properties whose tenants are eligible for rent supplements under Title I of the Housing and Development Act of 1965; and 9 privately owned or cooperative developments that receive mortgage interest subsidies under either Sec. 221(d)(3) or Sec. 236 of the National Housing Act. Finally, there are nearly 300 owner-occupied single-family homes whose owners receive mortgage interest subsidies under Sec. 235 of the same law.[4]

Altogether, subsidized units account for about 4 percent of all units in the county and subsidized renter-occupied units account for about 12 percent of all renter-occupied units in the county.

[3] These were residential properties classified in tax records as nonresidential and therefore eliminated in the first stage of sample selection. We learned about them in a subsequent fieldcheck of a sample of "nonresidential" properties. See Daniel A. Relles, *Selecting the Baseline Sample of Residential Properties: Site II*, The Rand Corporation, WN-9027-HUD, October 1975.

Because we have no interview reports on the unsampled properties that would enable us to classify them by occupancy status, rent or value, or characteristics of occupants, we have excluded them from all tables in this section.

[4] There are other rental properties and owner-occupied homes with FHA mortgage insurance or VA guarantees. Although there is an element of subsidy in some of these arrangements, the housing they offer is available to the public only at market prices.

Table 5.1

Distributions of Residential Properties and Housing Units, by Type of Property: St. Joseph County, Indiana, 1974

Type of Property	Residential Properties		Housing Units	
	Number	Percent	Number	Percent
Single-family House[a]				
Owner-occupied	55,025	82.7	55,025	68.5
Renter-occupied	5,751	8.6	5,751	7.2
Vacant	2,294	3.4	2,294[b]	2.9
Total	63,070	94.8	63,070	78.5
2-4 Units				
Rental	3,169	4.8	7,395[c]	9.2
5+ Units				
Rental	244	.4	6,842[c]	8.5
Cooperative	5	(f)	1,177[d]	1.5
Total	249	.4	8,019	10.0
Mobile Home				
Mobile home park	17	(f)	1,867[e]	2.3
Other	4	(f)	4	(f)
Total	21	(f)	1,871	2.3
All types	66,509	100.0	80,353	100.0

SOURCE: Tabulations by HASE staff of property information and screening survey records for Site II.

NOTE: Except for single-family houses, housing units are classified here by the type of property on which they are located, not by the tenure of their occupants. Percent age distributions may not add exactly to 100.0 because of rounding.

[a] Includes an estimated 9,050 single-family houses whose tenure was not established. On the basis of field experience with similar properties, 75 percent were assumed to be owner-occupied, 10 percent renter-occupied, and 15 percent vacant.

[b] Vacant units may be available for rent, for sale, both, or neither.

[c] Includes 1,300 units occupied by resident landlords.

[d] Includes some units on cooperatively owned properties that are rented or available for rent

[e] About 90 percent of all occupied mobile home vehicles are owned by their occupants.

[f] Less than 0.1 percent.

Table 5.2

Distribution of Federally Subsidized Housing Units by Type of Property by Subsidy Program: St. Joseph County, Indiana, 1974

Federal Subsidy Program	Number of Housing Units			
	Single-family House	2-4 Units	5+ Units	All Types
Low-rent public housing	377	66	833	1,276
Rent supplements	--	--	300	300
FHA interest subsidy:				
Rental	--	--	995	995
Coop	--	--	599	599
Homeowner	286	--	--	286
All programs	663	66	2,727	3,456

SOURCE: Tabulations by HASE staff of records provided by HUD's Indianapolis Area Office, the South Bend Housing Authortiy, and the Mishawaka Building Department, current to August 1974.

NOTE: Estimates from screening survey records for a sample of these properties disagree in details relating to small properties due to normal sampling error.

Type of Unit and Housing Cost

When the 1974 housing inventory is classified strictly in terms of the tenure status of individual units rather than by the type of property on which the units are located, the county total of 80,400 units divides into about 19,900 that were renter-occupied or for rent and about 59,000 that were owner-occupied or for sale. Another 1,400 units, including unfinished new construction, were vacant but not available either for rent or for sale.

Unsubsidized Rental Housing. Table 5.3 describes most of the unsubsidized rental stock, reporting on 14,700 occupied housing units. They range in type and size from efficiency apartments without separate bedrooms to single-family houses with as many as five or six bedrooms. However, over 70 percent of them have either one or two bedrooms, adequate accommodations for two to four persons, depending on their ages and relationships. About 42 percent of all these units are single-family houses rather than apartments.

The table shows how units of each size are distributed by monthly gross rent, a figure that includes the estimated monthly cost of heating and cooking fuel, electricity, and water and sewage charges. Even so, the median rents are modest by big-city standards, ranging from $109 for efficiency apartments to about $165 for three- and four-bedroom homes.

Overall, the median gross rent is $143, and nearly 58 percent of all units have rents of between $100 and $180. Those with rents of below $100 (about 15 percent of the total) are mostly small, two-thirds having no more than a single bedroom.

Table 5.3

Distribution of Unsubsidized Renter-occupied Housing Units by Monthly Gross Rent by Number of Bedrooms: St. Joseph County, Indiana, 1974

Monthly Gross Rent ($)[a]	Percentage Distribution, by Number of Bedrooms per Unit[b]					
	0	1	2	3	4+	All Sizes
Under 60	15.0	1.2	.7	.1	--	1.3
60-79	10.2	8.5	1.9	.3	8.0	4.3
80-99	19.5	18.7	5.2	1.2	7.2	9.6
100-119	11.8	22.8	12.7	21.6	6.8	17.2
120-139	19.7	15.8	17.0	9.8	8.9	15.2
140-159	8.5	11.7	18.0	13.9	19.7	15.0
160-179	13.3	11.4	8.4	11.3	14.6	10.3
180-199	--	7.8	7.9	12.4	10.3	8.4
200-219	2.0	1.7	13.9	6.9	7.3	8.0
220-239	--	.1	4.7	3.8	4.6	2.8
240-259	--	--	4.8	8.3	2.7	3.6
260 or more	--	.3	4.7	10.4	9.8	4.2
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of units	609	4,771	6,328	2,475	545	14,728
Median rent ($)	109	119	154	165	159	143

SOURCE: Tabulations by HASE staff of records of the screening survey for Site II.

NOTE: Estimates are based on a sample of 3,145 complete and 1,113 incomplete records for renter-occupied housing units, together representing a population of 14,728 such units. The population of units represented by incomplete records has been allocated by size of unit and rent within sampling strata and subareas of the county. Percentage distributions may not add exactly to 100.0 because of rounding.

The county total of unsubsidized renter-occupied units is estimated to be 15,800. Those excluded from this table are about 930 single-family houses and about 140 rented mobile homes.

[a] Contract rent plus an estimate by HASE staff of the average monthly cost of utilities that the respondent reported were not included in contract rent.

[b] Excludes unventilated bedrooms.

To put these rents in perspective, we note that the median income reported by families in St. Joseph County in 1970 was $10,389. A family with that income paying $180 per month—enough for all but the most expensive fourth of the units—would have a rent/income ratio of about 20 percent.

Subsidized Rental Housing. The rental inventory included about 2,600 units of federally subsidized housing. Table 5.4 reports on those that were occupied. Rents paid by the tenants of these units are normally a function of their incomes, not of the market value of the housing. However, tenants whose income rises above the maximum permitted at the time of occupancy usually remain in occupancy, paying the full market rent for their housing. Nearly a third of the subsidized units rent for less than $60 per month, and nearly half rent for less than $100. At the other

Table 5.4

Distribution of Subsidized Renter-occupied Housing Units by Monthly Gross Rent by Number of Bedrooms: St. Joseph County, Indiana, 1974

Monthly Gross Rent ($)[a]	Percentage Distribution, by Number of Bedrooms per Unit[b]					
	0	1	2	3	4+	All Sizes
Under 60	93.8	55.1	15.2	13.0	15.6	32.1
60- 79	--	13.7	6.7	10.1	42.5	12.3
80- 99	--	0.7	3.4	12.7	19.4	4.7
100-119	6.2	14.6	5.6	11.0	4.4	9.9
120-139	--	7.4	25.7	4.4	3.8	13.3
140-159	--	3.4	31.2	12.0	9.4	15.3
160-179	--	5.0	4.1	15.6	3.1	6.0
180-199	--	--	5.4	1.2	--	2.2
200-219	--	--	--	18.5	--	2.8
220 or more	--	--	2.6	1.7	1.9	1.3
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of units	32	982	893	363	160	2,430
Median rent ($)	(c)	(c)	135	135	76	102

SOURCE: Tabulations by HASE staff of records of the screening survey for Site II.

NOTE: Estimates are based on a sample of 230 complete and 52 incomplete records for renter-occupied housing units, together representing a population of 2,430 such units. The population of units represented by incomplete records has been allocated by size of unit and rent within sampling strata and subareas of the county. Percentage distributions may not add exactly to totals because of rounding.

The county total of subsidized renter-occupied units is estimated to be 2,430, all represented in this table.

[a] Contract rent plus an estimate by HASE staff of the average monthly cost of utilities that the respondent reported were not included in contract rent.

[b] Excludes unventilated bedrooms.

[c] Under $60.

end of the scale, less than 7 percent have rents in excess of $180. For the public housing projects, these rents include heat and other utilities, but the division of responsibilities for utilities varies in the projects subsidized under Sec. 221(d)(3) and Sec. 236 of the National Housing Act.

Owner-occupied Homes. The county's 58,400 owner-occupied homes are not all conventional single-family houses. The number includes about 1,300 units on multiunit rental properties that are occupied by resident landlords, about 1,100 cooperative apartments, and about 1,400 mobile homes. Table 5.5 reports on 49,700 owner-occupied homes, excluding mobile homes and about 7,300 others that were sampled but for which we obtained too little information to describe them reliably.

Since the homes in the table are nearly all single-family houses, it is not surprising that they tend to be larger than rental units, 65 percent of which are apartments

Table 5.5

Distribution of Owner-occupied Housing Units by Market Value by Number of Bedrooms: St. Joseph County, Indiana, 1974

Estimated Market Value ($)[a]	Percentage Distribution, by Number of Bedrooms per Unit[b]					All Sizes
	0 or 1	2	3	4	5+	
Under 5,000	5.0	2.3	1.2	.1	.2	1.5
5,000- 9,999	14.3	13.9	5.6	6.9	12.0	9.0
10,000-14,999	37.1	31.9	11.0	17.8	5.6	19.4
15,000-19,999	14.0	32.9	18.2	8.9	9.4	20.7
20,000-24,999	11.0	7.8	19.8	11.8	9.4	14.1
25,000-29,999	4.6	6.9	18.1	14.4	2.0	12.8
30,000-34,999	.7	1.2	10.8	4.1	9.5	6.3
35,000-39,999	.5	.8	5.2	9.1	9.0	4.4
40,000-44,999	7.7	1.2	5.2	10.7	10.1	5.2
45,000-49,999	1.9	.5	.1	2.7	8.9	1.1
50,000 or more	2.5	.7	4.7	13.7	24.0	5.6
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of units	2,529	14,917	22,547	7,611	2,131	49,735
Median value ($)	14,100	15,300	23,500	26,600	36,100	19,900

SOURCE: Tabulations by HASE staff of records of the screening survey for Site II.

NOTE: Estimates are based on a sample 2,564 complete and 595 incomplete records for owner-occupied housing units, together representing a population of 49,735 such units. The population of units represented by incomplete records has been allocated by size of unit and market value within sampling strata and subareas of the county. Percentage distributions may not add exactly to 100.0 because of rounding.

The county total of owner-occupied housing units is estimated to be 58,383. Those excluded from this tabulation are 1,400 mobile homes and 7,300 conventional units for which survey information was lacking.

[a] Estimated by respondent.

[b] Excludes unventilated bedrooms.

in multiple dwellings. Three bedrooms is the most common number, but nearly 18 percent have four or more bedrooms. Not surprisingly, median market value increases with unit size, from $14,100 for the smallest class to $36,100 for units with five or more bedrooms.

The inventory includes many low-value units, affordable even by households whose incomes are low enough to make them eligible for housing allowances. Our data indicate that there were about 5,000 single-family houses valued by their owners at less than $10,000 and 15,000 valued at less than $15,000. Most of these are small, with one or two bedrooms; but 6,000 of those valued at less than $15,000 had three or more bedrooms.

The modesty of these prices is perhaps best suggested by comparison with home values in our other experimental site, Brown County. As shown in Table 5.5, the median value of all owner-occupied homes in St. Joseph County in August 1974 was

about $19,900. Baseline survey data for Brown County, collected earlier that same year, indicate that the countywide median there was $24,200, or 22 percent greater.

The 1,400 owner-occupied mobile homes, virtually all located in mobile home parks, are more like apartments than single-family houses, both in their dependence on services and facilities provided by the park's management and in the size and arrangement of their interiors. But a number of them have two or even three bedrooms, and some even have more than one bathroom. They are excluded from Table 5.5 because the screening survey did not obtain estimates of their market values. (In Site I, the median value of mobile homes in 1974 was about $5,000, and few were valued at more than $10,000.)

Housing Quality

One purpose of the screening survey was to obtain data on individual housing units that would enable us to cross-classify them by size, quality, and rent or value. Housing quality is a nebulous concept, difficult to translate into empirical measures. However, Rand's Field and Program Operations Group worked with HUD staff to devise a set of minimum standards for housing occupied by program participants. Each unit nominated for occupancy by an enrollee is visited by a trained evaluator from the HAO, who conducts a 45-minute inspection of the premises, rating seven items for each room and 22 general items.

That much information could not be gathered in a screening survey interview. Instead, we devised a smaller set of six indicators of housing quality, each reflecting a key element of the HAO's certification standards.[5] These indicators capture information on the most serious of common defects affecting health, safety, or comfort, but are limited to items readily reportable by the occupant:

- *Plumbing:* Complete plumbing facilities inside the structure (hot and cold piped water, flush toilet, and bathtub or shower) not shared with another household.
- *Kitchen facilities:* Complete kitchen facilities (sink with piped water, range or cookstove, and refrigerator) not shared with another household.
- *Light and ventilation:* At least one openable window or skylight in each habitable room.
- *Electrical service:* One electrical outlet and one light switch in each habitable room and in at least one complete bathroom.
- *Heating system:* A permanent and properly vented heating system serving at least the living, dining, and kitchen areas and one bathroom.
- *Fire exits:* At least two exits from the floor on which the unit is located, leading to safe, open space at ground level.

A housing unit that failed any of these tests would clearly be uncertifiable under the standards promulgated in the *HAO Handbook*. The converse is not true: A unit could pass these tests, yet fail others embodied in the program standards. Consequently, our screening survey test of housing adequacy ought to fail fewer units than would be failed by HAO evaluations.

We should note that one of these indicators, the light and ventilation require-

[5] See Lowry, Woodfill, and Dade, *Program Standards for Site II.*

ment, is designed to fail a room rather than a housing unit. In our tabulations of screening survey data, we therefore excluded windowless rooms from our count of a unit's habitable rooms, judging the housing unit's quality by the other five indicators.

In the screening survey instrument, these five indicators are reflected in ten questions, each of which is paraphrased in Table 5.6. The table indicates the estimated percentages of housing units failing each item, based on responses to the screening survey. About 3,500 federally subsidized units, ineligible for occupancy by program participants, are excluded from the tabulation.

The most conspicious entry in the table is for rental units: the 22.3-percent failure rate of the requirement for two or more fire exits. This reflects the common circumstance of apartments in multiple dwellings that have but a single access

Table 5.6

Incidence of Substandard Housing Units, by Type of Defect and Tenure of Occupant: St. Joseph County, Indiana, 1974

Item	Percent of Housing Units Failing Each Item, by Tenure		
	Renter[a]	Owner[a]	Total[b]
1. Complete plumbing facilities?	1.0	0.1	0.3
2. If complete, plumbing facilities not shared?	1.7	0.8	1.0
3. Complete kitchen facilities?	2.8	0.3	0.9
4. If complete, kitchen facilities not shared?	1.1	0.6	0.7
5. Heat in kitchen, living room, and dining room?	5.0	1.8	2.5
6. Heat in one or more bathrooms?	5.2	1.5	2.4
7. Vents for heating equipment?	1.6	0.6	0.7
8. Electrical switch and outlet in all habitable rooms?	5.0	2.7	3.2
9. Electrical switch and outlet in one or more bathrooms?	7.1	2.4	3.5
10. Two or more fire exits?	22.3	0.7	5.8
At least one item	39.8	9.7	16.8
At least one item, excluding No. 10	24.6	9.0	12.7

SOURCE: Tabulations by HASE staff of records of the screening survey for Site II.

NOTE: Entries differ slightly from those reported in Lowry, Woodfill, and Dade, *Program Standards for Site II*, Table 1, because of subsequent changes in sampling weights for individual records.

[a]Excludes federally subsidized housing units.

[b]Excludes federally subsidized housing units and includes about 200 not clearly classifiable as to tenure.

doorway and, not infrequently, only one stairwell from the floor on which the unit is located. The requirement is more stringent than local housing codes and has since been relaxed by the HAO, which now requires only one exit from the unit and two from the building.[6] As can be seen from the table, owner-occupied units nearly always meet this requirement.

It is striking, though not surprising, that rental units fail each item more frequently than do owner-occupied units. Overall, nearly 40 percent of the rental units but only 10 percent of the owner-occupied units failed at least one item. If the fire exit requirement is excluded, the overall failure rates are 25 percent for rental and 9 percent for owner-occupied units.

Either way, these data indicate that the housing stock in Site II is of lower quality than housing in Site I. For example, only 27 percent of all Site I rental units failed at least one item, vs. 40 percent in Site II; and excluding the fire exit requirement, the overall failure rate for rental units was 20 percent in Site I, vs. 25 percent in Site II.

The data are consistent with our impressions from tours of both sites and from the experience of HAO evaluators to date. In South Bend particularly, there are large numbers of deteriorating or dilapidated residential properties, both multiple dwellings and single-family homes. Whereas the HAO in Site I failed about 43 percent of the units occupied or nominated for occupancy by enrollees during the program's first year,[7] the corresponding failure rate in Site II has been 64 percent over the program's first nine months.

Trends in Market Conditions, 1970–1974

Countywide, the number of housing units changed very little in the interval between the 1970 Census of Housing and our 1974 screening survey. The 1970 census enumerated 78,901 housing units in the county, but if the Census Bureau's own estimates of underenumeration in areas with mailback censuses are applied here, the true figure was probably closer to 80,000. Our sample survey indicates a total of 80,353 for 1974; but as noted earlier, the true figure is probably closer to 83,000. Thus, in a period of 4.3 years, the county's housing stock increased by 4,100 units at most, or about one percent per year.

According to reports filed with the U.S. Department of Commerce by local authorities, a total of 5,774 housing units were authorized by building permits issued from 1970 through 1973.[8] However, issuance of a permit is not equivalent to actual construction, which may be delayed for months or even years, or may not occur at all. As nearly as we can judge from collateral evidence, no more than 4,000 housing units were actually built and ready for occupancy between April 1970 and August 1974, and about 1,000 mobile homes were newly occupied during the same period. Demolition permits indicate that at least 1,000 units were removed from the inventory, so that the net increase was again no more than 4,000 units.

Table 5.7 compares the 1970 and 1974 housing inventories, giving details by

[6] The screener question asks whether there are at least two exits from the *floor* on which the unit is located, leading to safe open space at ground level.

[7] Through September 1975, the failure rate for Site I was higher, about 49 percent.

[8] U.S. Department of Commerce, *Housing Authorized by Building Permits and Public Contracts*, Construction Reports Series C-40, U.S. Government Printing Office, Washington, D.C., 1970-1973.

Table 5.7

Changes in the Housing Inventory, by Occupancy Status: Selected Areas of St. Joseph County, 1970-1974

Occupancy Status	Number of Housing Units		Percentage Distribution by Occupancy Status		Percentage Change, 1970-1974[a]
	1970	1974	1970	1974	
City of South Bend					
Occupied by renter	10,973	11,917	25.2	28.0	8.6
Occupied by owner	30,309	28,494	69.6	66.8	-6.0
Vacant, for rent	985	1,091	2.3	2.6	10.8
Vacant, for sale	502	495	1.2	1.2	-1.4
Vacant, not available[b]	752	627	1.7	1.5	-16.6
Total	43,521	42,624	100.0	100.0	-2.1
City of Mishawaka					
Occupied by renter	3,163	3,416	25.4	25.5	8.0
Occupied by owner	8,888	9,203	71.3	68.9	3.5
Vacant, for rent	203	419	1.6	3.1	106.4
Vacant, for sale	56	38	.4	.3	-32.1
Vacant, not available[b]	150	278	1.2	2.1	85.3
Total	12,460	13,354	100.0	100.0	7.2
Remainder of County					
Occupied by renter	3,181	2,885	13.9	11.8	-9.3
Occupied by owner	19,152	20,686	83.6	84.9	8.0
Vacant, for rent	114	215	.5	.9	88.6
Vacant, for sale	140	124	.6	.5	-11.4
Vacant, not available[b]	333	465	1.5	1.9	39.6
Total	22,920	24,375	100.0	100.0	6.3
Total, St. Joseph County					
Occupied by renter	17,317	18,218	21.9	22.7	5.2
Occupied by owner	58,349	58,383	74.0	72.6	--
Vacant, for rent	1,302	1,725	1.7	2.1	32.5
Vacant, for sale	698	657	.9	.8	-5.9
Vacant, not available[b]	1,235	1,370	1.6	1.7	10.9
Total	78,901	80,353	100.0	100.0	1.8

SOURCE: U.S. Bureau of the Census, *1970 Census of Population and Housing: Census Tracts*, Series PHC(1)-200; and tabulations by HASE staff of property information and screening survey records for Site II.

NOTE: Entries for both 1970 and 1974 are probably slight underestimates. The average underestimation in areas with mailback census procedures in 1970 was 1.0 percent for occupied units and 10.5 percent for vacant units. The screening survey sampling frame excluded an estimated 2,700 housing units on residential properties whose tax records did not clearly indicate residential uses; nearly all are single-family homes, probably owner-occupied.

[a]The interval between reference dates of the census and screening surveys is 4.3 years. Percentage changes in the numbers of vacant units are less reliable than percentage changes in the numbers of occupied units because of the greater likelihood of enumeration or sampling error for vacant units and because of their small numbers.

[b]Census counts include units rented or purchased but not yet occupied, seasonal homes, and housing reserved for migratory workers. Units unfit for habitation and vacant mobile homes are not counted as part of the housing inventory. In the screening survey, vacant mobile homes are included as part of the inventory.

occupancy status for selected areas of the county. Since it is based on census reports and screening survey records without adjustments for underenumeration, the table shows a countywide increase of only 1,400 units, which is probably an underestimate.

The changes by occupancy status and by area should be interpreted cautiously because they are small and thus easily magnified by enumeration or sampling errors. Furthermore, both South Bend and Mishawaka annexed unincorporated territory during the interval, so some changes in the data for individual areas are simply the results of shifting jurisdictional boundaries.[9]

Looking first at the total numbers of housing units in each jurisdiction, we see that the inventory shrank appreciably in South Bend but grew in Mishawaka and the remainder of the county. South Bend gained renters but lost homeowners, Mishawaka gained in both categories, and the rest of the county lost renters but gained homeowners.

The decrease in the number of South Bend homeowners, partly offset by an increase in the number of renters, could have come about in several ways. One is by the demolition of single-family homes and the construction of new rental housing. Another is by the conversion to rental properties of houses that were owner-occupied in 1970, with a change of occupants. Finally, changes in the numbers of occupied homeowner and rental units could occur without any changes in the housing stock or in the tenure of individual units if vacancies increased among homeowner units or decreased among rental units.

The data on vacancies in Table 5.7 show that the last is not a plausible explanation of the large and opposite changes in the homeowner and renter populations. We believe that the first two explanations, and especially the second, are the correct ones. South Bend has many modest single-family houses whose first owners bought them many years ago; and in part because of undesired changes in the neighborhoods, in part because that generation of owners is dying out, many of these homes come on the market. The surplus of housing makes them hard to sell, and the former owner-occupants or their heirs temporize by renting them.

If the data for Mishawaka and the remainder of the county are combined, they show no change in the number of renter-occupied units but an increase of nearly 1,900 owner-occupied units. We think that the apparent increase in rental units in Mishawaka and the offsetting decrease in the remainder of the county are due more to boundary changes than to construction or demolition. The increase in owner-occupied units in both jurisdictions is due to new construction, but its allocation between them may also be affected by boundary changes.

Table 5.8 shows what has happened recently to vacancy rates in the three areas of the county discussed above. It should be noted that "instantaneous" vacancy rates are difficult to estimate accurately, even from a complete enumeration of the housing stock such as is attempted by the decennial census; and rates for different months of the year (in the present case, April and August) may reflect seasonal differences in residential mobility.

[9] For instance, there are three large developments near Mishawaka's city limits, together containing 600 housing units. Tax records updated to December 1973 place all three outside the city, in Penn township. Current reports from the field indicate that they are now inside the city limits. In Tables 5.7, 5.8, and 5.9, these housing units and their occupants are counted as belonging to the "remainder of county."

The strongest message of the data in Table 5.8 is that the supply of rental housing that in 1970 was excessive only in South Bend was by 1974 excessive in both South Bend and Mishawaka and was increasing elsewhere in the county. Homeowner vacancies did not change much in any jurisdiction, but we think this is partly because vacant single-family homes that prove difficult to sell are often offered for rent and so become rental vacancies.

Table 5.8

Vacancy Rates, by Tenure: Selected Areas of St. Joseph County, 1970 and 1974

Area	Rental Vacancy Rate (Percent)		Homeowner Vacancy Rate (Percent)	
	1970	1974	1970	1974
City of South Bend	8.2	8.4	1.6	1.7
City of Mishawaka	6.0	10.9	.6	.4
Remainder of county	3.5	6.9	.7	.6
Total, St. Joseph County	7.0	8.6	1.2	1.1

SOURCE: Calculated from entries in Table 5.7.

NOTE: The rental vacancy rate is the percentage of all rental units that were vacant, for rent, at the time of survey. The homeowner vacancy rate is the percentage of all homeowner units that were vacant, for sale, at the time of survey. Vacant units that were not available for rent or for sale are excluded from these calculations.

Population Shifts Within the County

A review of the patterns of population growth and household formation in St. Joseph County does much to explain the lethargy of its housing market, particularly in the central city.

From 1960 to 1970, the county's population grew by only 2.7 percent. All the growth occurred outside South Bend, whose population decreased by 5.2 percent during the decade. Since 1970, it appears from our data that there has been a small countywide decrease in the number of persons, principally reflecting further population losses in South Bend.

For housing-market analysis, the more useful unit of account is the household. Table 5.9 compares the numbers of households living in St. Joseph County in 1970 and 1974, with separate comparisons for South Bend, Mishawaka, and the remainder of the county. It also shows their distribution by race in those years.

Because household sizes are declining in St. Joseph County (as elsewhere in the nation), the county's recent net loss of population is not reflected in a commensurate decrease in the number of households. But the redistributive pattern is the same for persons and households, and can be traced back at least to 1960: The oldest and most

Table 5.9

Distribution of Households, by Race of Head: Selected Areas of St. Joseph County, 1970 and 1974

Race of Household Head	Number of Households		Percentage Distribution by Race of Head		Percentage Change, 1970-1974[a]
	1970	1974	1970	1974	
City of South Bend					
White, non-Spanish[b]	36,345	34,950	88.0	86.5	-3.8
Black	4,609	5,154	11.2	12.8	11.8
Chicano	328	308	.8	.8	-6.1
Total	41,282	40,412	100.0	100.0	-2.1
City of Mishawaka					
White, non-Spanish[b]	11,999	12,550	99.6	99.5	4.6
Black	32	39	.3	.3	21.9
Chicano	20	30	.2	.2	50.0
Total	12,051	12,619	100.0	100.0	4.7
Remainder of County					
White, non-Spanish[b]	22,021	23,357	98.6	99.1	6.1
Black	167	194	.7	.8	16.2
Chicano	145	21	.6	.1	-85.5
Total	22,333	23,572	100.0	100.0	5.5
Total, St. Joseph County					
White, non-Spanish[b]	70,365	70,857	93.0	92.5	.7
Black	4,808	5,387	6.4	7.0	12.0
Chicano	493	359	.7	.5	-27.2
Total	75,666	76,603	100.0	100.0	1.2

SOURCE: U.S. Bureau of the Census, *1970 Census of Population and Housing: Census Tracts*, Series PHC(1)-200; and tabulations by HASE staff of property information and screening survey records for Site II.

NOTE: Entries for both 1970 and 1974 are probably slight underestimates; see Note to Table 5.7. Percentage distributions may not add exactly to 100.0 because of rounding.

[a]The interval between reference dates of the census and the screening surveys is 4.3 years. Percentage changes in the numbers of black and Chicano households are much less reliable than percentage changes in the numbers of white households because of the greater likelihood of reporting and sampling errors for minority households.

[b]Includes small numbers of American Indians, orientals, and others not elsewhere classified.

densely populated part of the county is losing households to the newly developing urban fringe.

Between 1970 and 1974, South Bend lost nearly 900 households; Mishawaka gained about 600; and the remainder of the county gained about 1,200. South Bend has lost about 3,200 households since 1960, so it is not surprising that vacancy rates there are high.

Changes in Racial Composition

The changes in racial composition shown in the table are less reliable than changes in the total number of households, for two reasons. One is that except for blacks in South Bend, the entries for minority groups deal with very few cases, subject to relatively large enumeration errors in 1970 and sampling errors in 1974. The second reason is that in the 1970 Census of Population and Housing, respondents received a census questionnaire through the mail, which asked them among other things to indicate their racial identities. In our screening survey, classification of households by race is based on the interviewer's observation of the respondent. It is not clear how close a match there is between racial self-identification and identification by others.

However, conservative inferences are adequate for present purposes. It can be reliably judged that the white population of South Bend has decreased and the black population has increased, both events being continuations of trends between 1960 and 1970. Further, there is no evidence in these data of any dispersion of blacks beyond the borders of South Bend.[10] Mishawaka and the remainder of the county were in 1974, as in 1960 and 1970, populated almost entirely by whites.

Although the Chicano population of St. Joseph County is quite small, we have shown it separately in the table because it would be easy for residents of the county to believe otherwise. Chicano leaders there have been very active and vocal about the interests of their group, acquiring political influence that is apparently disproportionate to their numbers.

The actual size of the county's Chicano population is a matter of definition, concerning which even Chicanos disagree. The figures for 1970 include all households at least one of whose heads reported Spanish as his mother tongue; those for 1974, based on fieldworkers' observations, reflect either the respondent's Spanish surname or his speech patterns. But even doubling the totals shown in Table 5.9 to allow for underenumeration or broader definitions, Chicano households would account for less than 1.5 percent of all households.

We do not attach much significance to the table's indication that the number of Chicano households declined between 1970 and 1974; sampling error alone in the 1974 estimate could easily produce that result. We do feel safe in saying that the number of Chicano households in St. Joseph County was quite small in 1974, as well as in 1970.

Summary

The screening survey data reported in the preceding pages indicate that the

[10] See the *First Annual Report*, pp. 45-47, for a discussion and a map of the pattern of black residential segregation within South Bend.

allowance program in Site II was mounted in the market environment we sought: a metropolitan housing market whose central city is losing population and which thus has a price-depressing surplus of older deteriorated housing; and one where there is also a large and growing low-income minority population, confined to the central city.

These features were sought in part because they are characteristic of a number of much larger urban areas that would be important in a national housing allowance program. Although St. Joseph County, with about 230,000 inhabitants, could never be mistaken for Chicago or St. Louis or Philadelphia, it has in microcosm the market structure and housing problems of such places. We await with intense interest the outcome of the housing allowance program in this complex environment. Below, we review the first indications.

THE FIRST NINE MONTHS OF HOUSING ALLOWANCES

The housing allowance program in Site II is still in a formative stage, with only nine months of operating experience and only six months of open enrollment as of the end of September 1975. Extensive analysis of the characteristics of clients and of changes in their housing since they enrolled is thus premature. We plan to undertake such an analysis using HAO administrative records covering the first full year of program operations, through December 1975. Meanwhile, we can draw on the HAO's monthly MIRs to provide the reader with basic information about the characteristics of those who have so far applied to or enrolled in the program.

Through 26 September 1975, the HAO had received 5,599 preliminary applications for enrollment, whose disposition is detailed in Fig. 5.1. Some of the MIR data refer to this group and some to the 2,044 households who were still enrolled on that date.

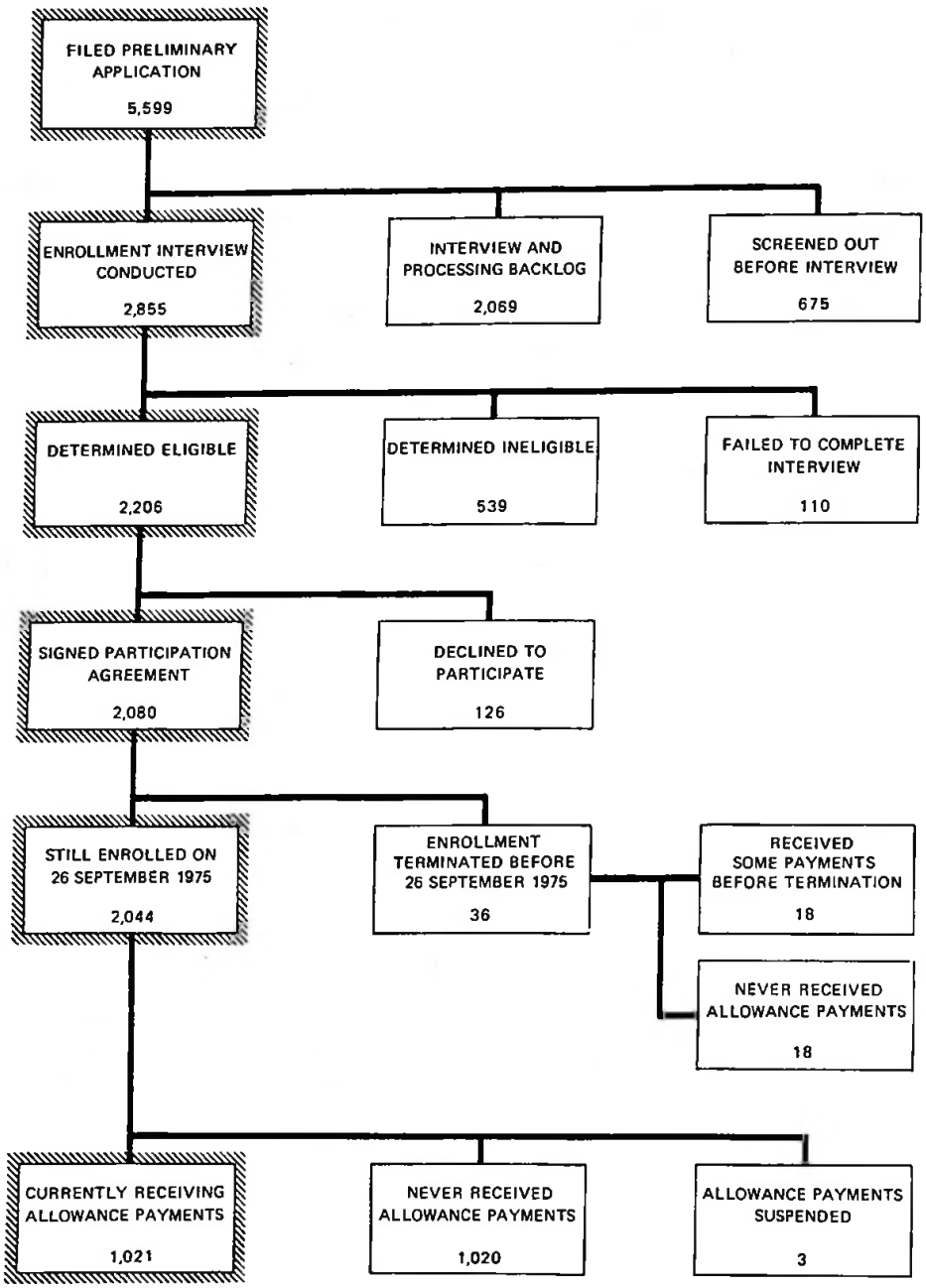
Characteristics of Applicants and Enrollees

Table 5.10 classifies the 5,599 applicants by age of head and housing tenure. Twenty-seven percent of the applicant households were headed by someone 62 or older, and nearly 54 percent were homeowners. Among the elderly applicants, 80 percent were homeowners; and among homeowners, 40 percent were elderly.

So far as we can judge from the tabulations in the MIRs, these proportions apply approximately to those who enroll as well as to applicants. For instance, 52 percent of the enrolled households were homeowners, vs. 54 percent of the applicants. And as shown in Table 5.11, the household sizes of applicants and enrollees are similar, though not identical.

Table 5.11 indicates that 18 percent of the applicant households and 23 percent of those enrolled consist of a single person; about a fourth of each group are two-person households; and about a third have three or four members.

Finally, it is important to note that 45 percent of those enrolled in Site II are black and 3 percent are Chicano, proportions that considerably exceed the incidence of these groups in South Bend's population—though perhaps not in its low-income



SOURCE: HAO management information reports for Site II through 26 September 1975.

Fig. 5.1—Status of all preliminary applications filed during first nine months: South Bend housing allowance program, September 1975

Table 5.10

Distribution of Applicants, by Age of Head and Housing Tenure: South Bend Housing Allowance Program, Through September 1975

Housing Tenure	Age of Head		
	Under 62 Years	62 Years or Over	Total
Number of Households			
Homeowner	1,786	1,211	2,997
Renter	2,301	301	2,602
Total	4,087	1,512	5,599
Percentage Distributions			
Homeowner	43.7	80.1	53.5
Renter	56.3	19.9	46.5
Total	100.0	100.0	100.0

SOURCE: HAO management information report for Site II as of 26 September 1975.

Table 5.11

Distributions of Applicants and Enrollees, by Size of Household: South Bend Housing Allowance Program, Through September 1975

Number of Household Members	Applicants		Enrollees	
	Number of Households	Percentage Distribution	Number of Households	Percentage Distribution
1	994	17.8	478	23.0
2	1,542	27.5	507	24.4
3-4	1,824	32.6	654	31.4
5-6	788	14.1	305	14.7
7-8	262	4.7	90	4.3
9+	137	2.4	46	2.2
Total	5,599[a]	100.0[a]	2,080	100.0

SOURCE: HAO management information report for Site II as of 26 September 1975.

NOTE: Household size classes correspond to those used in determining allowance entitlement.

[a]Includes 52 applications on which household size is unspecified.

population.[11] Estimates based on data from the screening survey indicate that only 13 percent of South Bend's households are headed by blacks, and less than one percent are headed by Chicanos. About 18 percent of all black and Chicano households in the city have enrolled in the program.

Comparing applicants and enrollees in Site II with those in Site I at the end of September 1975, we find many similarities and a few striking differences. The proportions of households headed by elderly and nonelderly are about the same, but there are relatively more single persons enrolled in Site I (28 percent, vs. 23 percent in Site II), and fewer families of five or six persons (10 percent, vs. 15 percent in Site II). The most striking differences are in race, tenure, and income.

In Site I, there have been only seven applications from blacks and four from Chicanos, the clear explanation being that these minorities are not represented in Brown County by more than a handful of households. The largest racial minority there consists of several hundred households of American Indians who are, like blacks and Chicanos in St. Joseph County, well represented among program applicants (138 have applied), even though they compose a very small fraction of all applicants.

The different proportions of renters and homeowners who have either applied to or enrolled in the program in each site are harder to explain. In St. Joseph County, as we have seen, nearly 54 percent of the applicants and 52 percent of the enrollees are homeowners. In Brown County, renters predominate, with homeowners accounting for only 43 percent of the applicants and 41 percent of the enrollees. Although the differences may prove to reflect the relative numbers of eligible renters and homeowners in each site, it currently does not appear to us that the numbers of eligibles differ in ways that would favor the outcomes noted. Rather, we think that eligible homeowners in St. Joseph County are more willing to participate than those in Brown County.

Table 5.12 compares income distributions of enrolled households in the two sites. The households are classified by adjusted gross income, the figure used to calculate allowance entitlement; on average, gross income is larger by about $1,000.

The distributions are remarkably different. Only a seventh of Site I enrollees but a third of Site II enrollees have incomes of under $2,000. The median income in Site I ($3,480) is larger than the median in Site II ($2,730) by 27 percent.

In comparing the income data for enrollees in the two sites, it is important to remember that enrollment in Site I was countywide from the beginning, whereas in Site II it has been confined to residents of South Bend for most of the enrollment period to date. However, even comparing all of Brown County's households with those in South Bend only, neither the 1970 Census of Population and Housing nor our own screening survey indicates differences in income distributions that are powerful enough to account for the differences in enrollees' incomes.

Thus, the median income of families in 1970 was only trivially higher in Brown County than in South Bend, and the median for unrelated individuals was somewhat lower in Brown County. The proportion of households below the poverty line was, however, slightly higher in South Bend. From our screening survey data on income

[11] South Bend is the residence of 92 percent of all those enrolled through September 1975. With the recent expansion of the program's jurisdiction, enrollments outside South Bend may be expected to increase soon relative to those in South Bend; and since few blacks live outside the city, the additional enrollees will be nearly all white.

Table 5.12

Distributions of Enrolled Households, by Income: Brown County and South Bend Housing Allowance Programs, September 1975

Adjusted Gross Income[a]	Brown County		St. Joseph County	
	Number of Households	Percentage Distribution	Number of Households	Percentage Distribution
Under 1,000	223	6.3	207	10.0
1,000-1,999	256	7.2	462	22.2
2,000-2,999	847	23.8	509	24.5
3,000-3,999	940	26.4	386	18.6
4,000-4,999	605	17.0	269	12.9
5,000-5,999	338	9.5	170	8.2
6,000-6,999	238	6.7	64	3.1
7,000-7,999	77	2.2	13	.6
8,000-8,999	18	.5	--	--
9,000-9,999	7	.2	--	--
10,000 or more	6	.2	--	--
All incomes	3,555	100.0	2,080	100.0
Median income	$3,480		$2,730	

SOURCE: HAO management information reports for Site I and Site II as of 26 September 1975.

[a]Gross cash income for all household members plus the imputed return to homeowner equities, minus exemptions and deductions prescribed for households assisted under Sec. 23 of the Housing Act of 1937, as amended.

and household size, we estimated that nearly the same proportions of households in South Bend as in Brown County would be eligible for assistance.

At present, we have no really good explanation why the allowance program in Site II has enrolled a distinctly lower-income group than has the program in Site I. This difference may be ephemeral, given the short period of enrollment in Site II that is covered by our data. In any case, the absence of cross-tabulations in the MIRs prevents us from exploring the circumstances of Site II's enrollees adequately; we will be able to do better at the end of 1975, when administrative records for the first year of program operations are reorganized into research files that can be thoroughly analyzed.

VI. PROBLEMS AND PROSPECTS

At the end of September 1975, the Supply Experiment had been in existence for nearly three-and-a-half years. The first eighteen months of that period were spent in designing the experimental allowance program and the research program and in planning for their implementation. Field operations began in Site I early in 1973, and the allowance program there began open enrollment in mid-1974. Partly by design and partly by necessity, activities in Site II lagged behind those in Site I; field operations began early in 1974, and the allowance program began open enrollment in April 1975.

In neither site has the allowance program yet reached its expected plateau of enrollment, but both programs are well established and currently serve the housing needs of substantial numbers of low-income households. Program administration is tightly organized, follows well-specified procedures, and is served by a machine records system that performs many routine clerical operations automatically and generates frequent and detailed statistical reports on each aspect of operations.

The research program has also matured during the past year. There is now a regular annual cycle of field surveys operating in each site, and HAO administrative records are regularly batched and delivered to Rand for analysis. In Santa Monica, Rand has developed and installed a machine-based record management system for maintaining the various survey samples, generating field materials (such as address labels, respondent information sheets, and directories) for each new survey wave, recording changes in the status of residential properties or the identity of respondents, tracking the progress of fieldwork, and accounting for field reports. We have also developed efficient and reliable procedures for converting hardcopy survey questionnaires and other field reports to machine-readable records, cleansing these records of errors and ambiguities, compiling them into well-documented research files, and auditing and analyzing the files. Analytical reports based on HASE data are at last emerging regularly, complementing the design and planning documents produced at earlier stages.

In this section, we review the agenda for the coming year, then discuss various problems in the future of the experimental allowance program and the research program.

AGENDA FOR THE COMING YEAR

The year ahead—from 1 October 1975 to 30 September 1976—promises to be the first in which nearly all HASE tasks will have precedents to guide them. In both the allowance program and the research program, we have entered a phase of largely repetitive operations, the challenge of which lies less in inventiveness under pressure than in coordination and control of a very large and complex but fairly stable enterprise.

With respect to the allowance program, our main task is to monitor the operations of each Housing Allowance Office to ensure that its actual policies and procedures conform to those agreed upon in the official handbooks; to provide it with

technical assistance in planning, budgeting, and operating procedures, and in recordkeeping; to maintain consistency of program standards and their application between the sites; and to formulate new policies and program standards as the need for them arises, negotiating with HUD and with the HAOs concerning their adoption. These tasks are generally the responsibility of HASE's Field and Program Operations Group, based in Washington but represented in each site by a site manager, who is also chairman of the HAO's board of trustees.[1]

With respect to the research program, the agenda is more complex, and is driven by the annual cycle of data collection in each site. The sequence of events connected with a single field survey occupies up to twenty-four months: revising the survey instrument; selecting or updating the survey sample; producing field materials for the survey; conducting the fieldwork; coding, keypunching, and cleaning the field reports; compiling a preliminary master file of machine-readable survey records; compiling a comprehensive codebook that interprets the recorded responses; auditing the file to determine the completeness and reliability of the data; documenting and archiving a permanent master file for the survey; analyzing the data pursuant to research objectives; and writing, editing, and producing reports. These functions are divided among five functional groups based in Santa Monica, a small survey operations staff in Washington, and two survey subcontractors with field offices on site.[2]

At any given time, up to three annual waves for a particular survey and site may be occupying the attention of one or another of the HASE research groups. Since there are three major surveys (of landlords, of tenants and homeowners, and of residential buildings) entailed in the annual cycle for each site and a fourth (of neighborhoods) that is conducted at less frequent intervals, the requirements for intergroup coordination and careful scheduling of work are considerable. In addition to the field surveys, there are quarterly deliveries of administrative records from the HAOs to be consolidated annually into research files that must also be audited, analyzed, and archived.

The specific tasks scheduled for performance during the coming year can best be grouped by the site and survey cycle or the period of HAO operations to which they pertain.

Site I

Baseline Survey Cycle. All records from the baseline surveys have been coded, keypunched, cleaned, and compiled into preliminary master files. These files have been audited and documented and are now being prepared for archiving as final master files. Most of the analysis has been completed, some reports have been issued, and nearly all others that are planned are in various stages of draft. We expect to complete the reporting schedule for this cycle in the spring of 1976.

Wave 2 Survey Cycle. Over 90 percent of the expected field reports have been received from the subcontractor and have entered the survey data preparation process. The cleaned records for each survey are scheduled to be ready for compila-

[1] Formal relationships between Rand and the HAOs in each site are described in Appendix C.

[2] A project organization chart is presented in Appendix C. Appendix D gives additional details about the internal organization and staffing of each group.

tion into preliminary master files during the first five months of 1976. Immediately thereafter, audit and analysis of these files will begin, and reports on them are scheduled for publication during the last three months of 1976.

Wave 3 Survey Cycle. Instrument revisions were in progress at the end of September 1975 and plans were being laid for fielding the third wave. The fieldwork is scheduled for January through July of 1976. The records from this survey cycle will not emerge from cleaning until early in 1977.

First-year HAO Records. Administrative records for the first year of program operations, through June 1975, have been organized into research files that are now undergoing audit and analysis. Reports on these files are scheduled for publication early in 1976.

Second-year HAO Records. Research files covering the second year of program operations, through June 1976, will be compiled in July and August. Reports based on them are scheduled for publication near the end of 1976.

Site II

Baseline Survey Cycle. Records from the baseline survey of landlords emerged from cleaning at the end of August 1975. Records from the other surveys are scheduled to follow in November, December, and January. Each file will then be audited, documented, and archived, the cycle to be complete by mid-1976. Concurrently, the data will be analyzed; audit and analysis reports are scheduled for publication early in the summer of 1976.

Wave 2 Survey Cycle. Instrument revisions were in progress at the end of September 1975 (jointly with instruments for Site I, Wave 3) and preparations for fieldwork are under way. In November, the permanent panel of residential properties will be selected from among those with complete baseline records. Fieldwork for the Wave 2 surveys is scheduled for January through July of 1976. Field reports from these surveys will have first priority in the cleaning process after work on records from Site I, Wave 2, is completed (early in 1976). The field reports should be ready for audit and analysis beginning in September 1976.

First-year HAO Records. Administrative records for the first year of program operations, through December 1975, will be organized into research files early in 1976, then audited, analyzed, and archived. Reports on these files should be ready for publication by midyear.

PROBLEMS AND UNCERTAINTIES

As the agenda indicates, we expect to be busy during the coming year, even if all goes smoothly. We must also be prepared to deal with a variety of problems, some now present or foreseeable, others not. Although Rand and HUD have jointly explored a variety of contingencies that may affect the success of the housing allowance program or the effectiveness of the research program, it is infeasible to plan in detail for managing any but the most serious and most probable of these. We must

rely on adaptive response to cope with unexpected developments and uncertain outcomes.

Below, we list a number of problems that currently concern us. We do so not because we are pessimistic about their outcomes but to flag them as matters that are likely to occupy our attention and HUD's during the coming year.

The Housing Allowance Program

We judge that the housing allowance programs in both sites are now well enough established as institutions serving recognized community needs that their effectiveness is unlikely to be seriously compromised by turnover in local government or by partisan attacks from program opponents. The principal problems for the coming year are those of effective program planning and efficient administration in the face of uncertainties about eventual program size. These uncertainties reflect imprecision in our estimates of the numbers of eligible households in each site; uncertainty about how many eligibles will eventually choose to learn about the program and enroll and how quickly those enrolled will qualify for payments; questions about the effects of possible changes in eligibility rules or benefit levels on enrollment; and in Site II, the effects of the possible expansion of program jurisdiction to include Mishawaka and the outlying parts of the country.

Eligibility Estimates. Initially, the only data available to us for estimating the numbers of eligible households in each site under proposed program standards were those contained in published tabulations of the 1970 Census of Population and Housing—data that were both obsolescent and scant in detail. Following the screening survey in each site, new estimates were prepared from the data thus obtained, data that had the merits of currency and of detailing most of the characteristics of individual households that bore on their eligibility. From them, we estimated that there were about 12,000 to 13,000 eligible households in Site I and from 16,000 to 18,000 in Site II, depending on whether those currently living in federally subsidized housing units were included.[3]

Recently, we have reestimated the number of eligible households in Site I, using baseline (early 1974) interviews with tenants and homeowners as the data base. We found that the more elaborate probes (relative to those of the screening survey) into details of household characteristics and income substantially altered the eligibility status of individual households that had been interviewed in both surveys. In particular, incomes reported in baseline interviews tended to be higher than those reported in the screening interviews a few months earlier, because more detailed questions were asked about its components. Using the baseline data, we estimate that, excluding those already receiving federal housing subsidies, there are about 8,000 eligible households in Site I, vs. the earlier estimate of 12,000.

If the estimates for Site II, now based on screening survey data, are proportionally reduced when baseline records are analyzed, we will have 11,000 eligible households there, again excluding those already receiving federal housing subsidies.

Participation Rates. Only in Site I has the program been operating long enough to warrant a guess at eventual participation rates. At the end of the first

[3] The latter can participate in the allowance program only if they move to unsubsidized housing. The Site II estimates cited here are for all of St. Joseph County; see comments below on program jurisdiction.

fifteen months of program operations, only about a third of all eligible housholds were enrolled. One reason appears to be a low level of awareness of the program, despite energetic outreach that includes advertising on the radio, in newspapers, and (recently) on television. It seems unlikely to us that the number of households receiving payments at any given time will ever much exceed half the estimated 8,000 households that are eligible under current program standards.

We do not think this outcome in Brown County should be considered a reliable forecast of participation in St. Joseph County. In the few months the program there has been open to general enrollment, interest and applications have been considerably higher than in Brown County. As explained in Sec. III, we think this fact reflects a profound difference between the two communities in their attitudes toward assistance programs in general, based partly on different experiences with them and partly on social and economic differences between the two populations.

Benefit Levels and Program Participation. One factor affecting both eligibility and the incentive to participate is the amount of benefits received. As explained in Sec. I, the benefit schedule reflects estimates from screening survey data of the standard cost of adequate housing in each site. In an inflationary environment, this cost increases over time. HUD and Rand agree that the time has come to review the schedule of standard costs for Site I, given the passage of two years in which consumer prices in general have risen at unprecedented rates.

It is desirable to base this review on the most current data on housing costs available to us; these are contained in the records of our second annual survey of tenants and homeowners, conducted in Site I during the first half of 1975. At the end of September, the records were still in the process of coding and keypunching, and the earliest date at which even unedited information can be obtained from them is expected to be December. A special effort is planned then to extract and analyze information from these records on contract rent and monthly utility bills, to serve as the basis for a review of the benefit schedule early in 1976.

Expansion of Program Jurisdiction in Site II. As explained in Sec. III, the allowance program in the second site was initially limited to the city of South Bend, other jurisdictions in St. Joseph County declining an invitation to participate. Recently, the county government and the South Bend Housing Authority agreed to extend the program to unincorporated county territory within five miles of the South Bend city limits, and one small incorporated municipality has also joined the program.

During the coming year, the issue of participation by Mishawaka and the remainder of the county is expected to be reopened. If both areas are added to the program's jurisdiction, the number of households eligible to enroll will increase by about a third. This change thus could have important implications for eventual program size and for the size of the HAO staff needed to operate the program.

Administrative Costs of the Allowance Program. At the beginning of program operations at each site, costs per assisted household or per dollar of allowance benefits were naturally high, since the HAOs were designed to serve an eventual 6,000 to 9,000 clients and only a few were then enrolled or receiving payments. Administrative costs per recipient have declined dramatically since then, as the number of recipients has grown and operations have become more efficient through

experience with them. After the high-cost period of enrollment is over, expenditure rates should settle down to a level that is acceptable for an efficient income-transfer program. It is already clear that unit costs are extremely sensitive to program size and that initial enrollment is considerably more expensive than routine service to a client who is already enrolled and living in approved housing.

However, achieving acceptable cost reductions will require considerable diligence on the part of both Rand's Field and Program Operations Group and HAO management over the coming year. FPOG and the HAOs are now engaged in cost analyses that will enable us to better understand the structure of present costs and their applicability to a national program. Improvements in cost control systems as will as cost-reducing procedural changes are anticipated.

Research Design

Over time, the emphasis of HASE research will undoubtedly shift as HUD and Rand review findings that suggest new questions about the effects of the experimental housing allowance programs, or as new issues of federal housing policy enter the arena of public discussion and it is perceived that data from the Supply Experiment can clarify them. However, we do not now foresee basic changes in the research design, whose conceptual soundness has been repeatedly tested by external reviews and which is now embedded in a data collection program whose feasibility is established.

The principal design issue yet to be resolved is the duration of the experiment. As we explain in Sec. I, the experimental allowance program in each site was firmly committed to ten years of operations in order to provide a local climate of expectations resembling that associated with a permanent program. The duration of the research program, however, was left open. Our best a priori judgment was that six annual cycles of data collection, one of which preceded the beginning of the allowance program, would be enough to reach reliable conclusions about the longrun effects of housing allowances on the local housing market and on the program participants themselves.

In both public and technical discussion of the housing allowance concept, much attention has been given to the problems that might arise when such a program first began operations. Providing housing allowances to a large number of low-income households who were free to choose where they would like to live and what they would pay for housing might cause rapid inflation in housing prices as the participants bid for better housing, might destabilize neighborhoods into which they moved or from which they came, might invite fraudulent practice or shoddy workmanship by the home repair industry as landlords and homeowners sought to improve their properties to program standards, or might upset the community generally.

In Site I, the allowance program has been in operation for fifteen months, and it is clear even before analysis of Wave 2 survey data that the introduction of the program did not significantly disturb the local housing market.[4] If the question of front-end effects were the only one of interest, our complex and expensive agenda of field surveys in Brown County could safely be terminated tomorrow. However, we could not then speak with any authority about even the shortrun consequences of

[4] See pp. 113-115 for conclusions on this score.

a fullscale program in that community, since the program has yet to reach its expected plateau of enrollment.

If, as we now expect, that plateau is reached during the second year of program operations without dislocating the local housing market, destabilizing neighborhoods, or upsetting the community in other ways, the marginal benefit to policymakers of additional survey cycles there will manifestly decrease. Once the possibility of shortrun calamity has been foreclosed, what remains to be learned is whether the program has gradual but cumulative effects on housing and neighborhood quality, how much its benefits spill over to nonparticipants, and how local institutions and housing-related industries adapt to its presence.

Over the longer run, we will address questions such as the following: By how much do program participants increase their housing expenditures and by how much does the quality of their housing improve? Are there any indications that those not participating in the program fare worse because of its effects on the market? Do landlords and homeowners in deteriorating neighborhoods maintain their properties better in order to benefit from the program? Does it become easier to get home improvement loans or mortgage financing in an allowance-supported market? Does local housing code enforcement become more effective when some of its economic impediments are thus removed? These questions are more difficult to answer unequivocally than those relating to more dramatic shortrun phenomena associated with the introduction of the program; but their answers are more important for judging the merits of the housing allowance approach to federal housing assistance.

It is also worth noting that a six-year series of comprehensive annual surveys of any local housing market—with or without an accompanying housing allowance program—would provide an unparalleled data base for testing a wide variety of housing policy assumptions and program proposals.

All these considerations must be weighed against the high cost of the research and also against the alternative uses of the intellectual resources that are so engaged. We have agreed with HUD that, following the completion of Wave 3 surveys in Site I, it will be appropriate to review the potential costs and benefits of additional survey cycles there. This review must be conducted in the early summer of 1976 if a possible outcome is a decision to cancel Wave 4. At that time, however, fieldwork for Wave 3 will just have been completed, and the only results that will be known are survey response rates.

It is already clear that there are substantial differences in the environments of Sites I and II as they relate to the housing allowance program, and these differences may indicate the desirability of quite different experimental durations in the two sites. Nonetheless, we judge that a similar reappraisal of the survey agenda for Site II will be appropriate following completion of Wave 3 there—i.e., during the early summer of 1977.

Field Surveys

Judging by current industry norms, we have been spectacularly successful in obtaining the data we sought from landlords, tenants, and homeowners in the two waves of surveys that have been completed in Site I. The baseline experience in Site

II was less satisfying, but the field completion rates of 63 to 68 percent for each major class of respondents are typical of urban interview surveys today.[5]

At this juncture, we have not only counted interview completions for Site I baseline surveys, but we have also audited the survey files for completeness and reliability of the data sought and have analyzed much of the data.[6] We are therefore able to say with confidence that the feasibility of our data collection plan has been proved at least for Site I, including its most daring feature, the use of mass-interview techniques to obtain detailed information on property income and expenses from a marketwide probability sample of the owners of rental properties.

In Site I, every test we have so far devised for nonresponse bias has indicated that it is at most a minor source of error in inferences drawn from completed interviews. In Site II, we expect more serious issues of this type, but we think our information about nonrespondents and our statistical techniques for correcting nonresponse bias will enable us to reach reliable conclusions about the populations sampled, despite the absence of full records on many of those selected for interviewing.

Our main concern at this point is the survey of residential buildings. As originally planned, this survey entails annual field reports on the external characteristics and condition of residential buildings on each property in the survey samples; on the characteristics and condition of the property's immediate neighborhood; and for multiple dwellings, on the characteristics and condition of interior public areas. The field reports do not rely on interviews but are completed on the basis of direct observation by fieldworkers trained in administering the instrument.

Our experience with this instrument has in many respects paralleled that of the Census Bureau, which concluded after the 1960 Census of Housing that it was unable to train fieldworkers to make reproducible judgments of housing quality, at least on the scale required by a national enumeration. The instrument we designed for use in the Site I baseline survey proved to be difficult to administer, and our audit of survey validation reports revealed that the rating scales we had devised for condition and quality items had a relatively low order of independent reproducibility.

Prior to baseline in Site II, the instrument was redesigned, with more emphasis on enumeration of observable features of the building and neighborhood and less scope for summary judgments by the fieldworkers. During the first week of fieldwork, there were problems with certain of the new methods, which led Westat to retrain fieldworkers in their use. Even with this retraining, validation reports indicate continued problems with the instrument.

The new instrument was also used for the Wave 2 survey in Site I, where it was even less successful. At least partly owing to inadequate training and a lag in implementing fieldchecks on interviewer performance, validation reports again indicated that much of the data collected were unreliable. To improve the data base, one module of the instrument was eventually refielded in about 1,300 cases—over half the sample.

Given these problems, it seems likely that the data collected will be insufficiently

[5] See Sec. II, pp. 25-31, for a discussion of fieldwork in Site I; and Sec. III, pp. 49-58, for corresponding details about Site II.

[6] See Sec. IV for selected findings.

precise to measure the normally small year-to-year changes in building and neighborhood condition that we expect to encounter. Although in any given year there will be some dramatic changes, as when a building undergoes rehabilitation or a neighborhood association mounts a cleanup campaign, in general the changes to be observed are subtle and gradual.

We will have a clearer understanding of the nature of our problems with this survey—whether they are inherent in the data sought, are due to inadequate instrument design, or are correctable by improved interviewer training and supervision—when we have audited the records from the baseline survey in Site II. If, indeed, mass-survey techniques will not serve to measure small year-to-year changes in building and neighborhood condition, it may be appropriate to conduct the survey at less frequent intervals—for instance, on the thirty-month cycle now planned for the survey of neighborhoods.

Survey Data Preparation

Because much of the interview data we seek refer to the preceding calendar year, the annual cycle of field surveys is scheduled simultaneously in each site, beginning with the survey of tenants and homeowners in January, followed by the survey of landlords in April, and by the survey of residential buildings in July. For those years in which the survey of neighborhoods is scheduled, the fieldwork for it begins in June and runs through September. Although fieldwork is thus spread over a period of up to nine months, about 90 percent of the data are collected between January and June in the interview surveys of landlords, tenants, and homeowners.

The survey subcontractors review each fieldwork assignment as it is completed, then ship the appropriate field reports to the Survey Data Preparation Group (SDPG) in Santa Monica. These reports include contact reports, completed questionnaires, vacancy or refusal reports, interview validation reports, field edit records, and other items. Altogether, about 45,000 documents are received annually from each site for coding, keypunching, cleaning, and assembly into individual case records. The peak workload for SDPG occurred in 1975, when baseline surveys in Site II coincided with Wave 2 surveys in Site I. Hereafter, surveys in both sites will be addressed to the owners, occupants, and buildings of the permanent panels of residential properties, which are smaller than the corresponding baseline samples.

The sheer volume of the documents received—altogether, about 90,000 annually—requires an extremely strict system of accountability from the moment of their arrival throughout the entire processing sequence. Most of the processing workload relates to a smaller set, the completed questionnaires from the surveys of landlords, tenants, and homeowners, each of which contains 1,200 to 2,200 response fields, whose contents must be keypunched and checked for errors or ambiguities; and the smaller completed questionnaires of the survey of residential buildings (438 response fields). Altogether, we estimate that the questionnaires to be processed by SDPG during the coming year will contain over 17 million response fields, of which perhaps two-thirds will be legitimately blank but must nonetheless be checked.

Coding, keypunching, and editing are done mostly by parttime workers, under the supervision of a professional staff. Experience with baseline surveys in both sites has led to the development of standard procedures for resolving all common problems; and once the data are keypunched, as many checks as possible are delegated to the computer. However, error messages (150,000 to 200,000 per survey cycle per

site) require resolution by an editor, who diagnoses the presumed error condition, usually by checking the hardcopy entries, and submits a keypunched correction card or override instruction.

To date, SDPG has an excellent record both with respect to accountability for documents received and for meeting production schedules. The principal management problem is coordinating production schedules with deliveries from the field, especially during the first half of the calendar year, before a backlog has accumulated. Field schedule slippages are frequent, and SDPG makes every effort to accommodate them without postponing delivery of the edited field reports file to the HASE Data Systems Group. But this can be done only at the expense of accelerating normal cleaning cycles, by means of staff overtime, special computer runs in prime time, and so on. Sporadic workloads also make it necessary to lay off trained staff, then hire and train new staff, a manifestly inefficient procedure.

Although many of these problems could be avoided simply by postponing the beginning of the data preparation cycle until all fieldwork for a survey is complete, this step would increase the elapsed time from field to analytical reporting by four to six months. Instead, we seek to compensate for the intrinsic difficulties of interactive scheduling by close management of resources.

On the technical front, the computer-based accountability and cleaning procedures developed over the past two years are working well, with the exception that they were not designed to perform interfile consistency checks. This problem arose when the instrument for the survey of tenants and homeowners was reformatted into physically separate modules, which are collected in the field into a "unit record folder" that accounts for the modules employed in a given interview. Current practice is to code, keypunch, and clean each module separately, then prepare a special program to check the consistency between modules pertaining to a given case as a separate, final operation. SDPG and the Survey Group are seeking a better solution for the next survey cycle.

Data Systems

The Data Systems Group is responsible for compiling master files from the edited field reports for each survey and from HAO administrative records, and subsequently for updating, processing, and storing these files to meet the needs of the Design and Analysis Group. With the Survey Group, it also operates and maintains the survey record management system (HAMISH) that serves field operations.

During the past year, DSG and DAG worked together to complete a cycle of audit and analysis of the baseline surveys from Site I. In the course of this work, much was learned about the characteristic data processing problems and requirements of our research agenda that bore on the design of a longrun system for data management, the appropriate division of responsibilities between DSG and DAG, and the kinds of software packages that would be most helpful in the future.

As a consequence, the Data Systems Group was reorganized during the summer of 1975, and a number of major technical decisions were reached about system design. A schedule was established for implementing these decisions in time to apply new methods to the baseline survey files from Site II, and both the utility software and the procedures needed for the initial stages of file processing were in fact ready when the first edited field reports file from that survey cycle was delivered to DSG at the end of August.

The critical technical standards of the new data system include the following:

- Data from each field survey and from each year of HAO operations will be maintained in a physically separate, self-defined, and separately documented master file.
- Each such file will consist of individual case records, which have a standard format. Within a file, all records will have the same length; the length of individual data fields is also fixed.
- Data are stored in a binary floating-point mode that is compatible with the most commonly used processing packages.
- Access to the data is controlled by a "dictionary" at the front of each file; the user need only know the name of the desired variable (record identifier or survey response) to retrieve a record or data item.

Because each survey file is accessed and documented independently of the others, the chances are remote for a systemwide breakdown that would halt all data processing. By storing the data within each file in rectangular arrays, access and processing are simplified at the cost of larger demands on computer core storage; however, these demands are readily and inexpensively accommodated by Rand's hardware configuration.

Simultaneously with the specification of improved standards for data storage and access, the technical capacities of the field record management system were expanded and polished so as to be ready for sample selection, presurvey activities, and the production of field materials in November and December. Programming support for the Design and Analysis and Survey groups was reorganized to permit greater flexibility in the allocation of resources and more effective supervision. The most important of the missing software utility packages needed for survey audit were developed and installed.

During the coming months, development of the new system will continue, keeping pace with the changing demands of the audit and analysis cycle. Much current planning relates to procedural matters governing the interaction of users and data. As routine operating modes are developed for common processing functions, their supervision is to be delegated to a data administrator, who controls access to the files and is responsible for their integrity and documentation.

Following the audit of each preliminary master file, a final master file is to be created, the records of which include the contents of the survey questionnaires, plus a number of derived variables created by DAG's auditors and analysts. Some of these are aggregates or transformations of survey responses; others are record condition indicators or comments on the quality of specific items of data. The entire file will be documented by a codebook covering every possible entry for each variable, and the file and codebook will be archived as a permanent data base. Backup copies of each file are stored off site, and both the inhouse and backup copies are periodically tested for readability.

Survey Audit

The Survey Data Preparation Group edits and cleans individual survey records, following questionnaire logic to determine which response fields should contain data, whether data have been entered only where they should be, whether the

entries consist of "legal" codes or characters, and whether entries in related response fields are logically consistent. The discrepancies encountered are usually resolved by consulting the hardcopy questionnaire or the subcontractor's field staff, and the machine-readable record is altered if appropriate.

When the cleaned records are assembled into the edited field reports file for a given survey, the Design and Analysis, Survey, and Data Systems groups conduct an audit of the file, dealing primarily with problems that would not be apparent from a review of each record separately. The first step is accountability; the edited field reports file is checked to determine whether each case on the sample list for the survey is represented by one and only one report from the field—e.g., a completed interview, a refusal report, or a contact failure report. When the sample list has been fully accounted for, the appropriate set of records is assembled into a preliminary master file in standard format.

This file is then audited by DAG, with data processing support from DSG. The purpose of the audit is to assess the completeness and reliability of the data obtained in the survey, a task with several components. One is a check on the completeness of individual records in relation to the requirements of the analytical agenda, a process that yields record condition indicators that are added to the file; these enable users to select only "complete" records for analysis. At this stage, marginally incomplete records are studied, case by case, to determine whether the missing data can be reliably inferred from notes in the questionnaire, retrieved by additional fieldwork, or estimated from other entries in the record.

A second step is sample validation and testing for nonresponse bias. Sample selection and field procedures are reviewed to determine whether the sample list appropriately represented the population from which the sample was supposedly drawn; and the set of complete records is compared with the set of refusals and contact failure reports to determine whether nonrespondents differ significantly from respondents (some comparable data are always available for both classes). Record weights based on the sampling histories of individual cases are calculated and added to the file; and alternative weights for subsets of complete records, correcting as necessary for nonresponse, are also calculated and stored.

Finally, a number of tests are run on important variables, to check the internal consistency of entries on individual records and the plausibility of distributions of values across all records. Outliers from both univariate and multivariate distributions are individually reviewed, and some are traced to errors in the field or in data preparation. In the clearest cases of error, the entries are changed; entries that are implausible but not clearly wrong are simply flagged in the file as suspicious data.

At the end of the audit, an audit report is prepared by DAG, and the audited file is submitted for archiving as a final master file for the survey. The records in the final master file include not only the data reported from the field, but a number of derived variables added during the audit—record condition indicators, suspicious data flags, record weights, new variables created by transformation or aggregation, etc. All changes made to the preliminary master file must be documented, and DSG's data administrator compares the two files to ensure that all changes are in fact accounted for.

Because the basic plan for the survey audit was devised nearly two years ago,[7]

[7] See Chesler and others, *Baseline Audit Plan.*

experience with the baseline survey files for Site I changed many of our perceptions as to the relative importance and complexity of its various elements, uncovered many new problems that may be expected to recur in future files, and led to the development of standard computer software to support many tasks handled then by custom programming. The division of responsibilities between DAG and DSG was redefined during the summer of 1975, and procedures and milestones were clarified.

The importance of these events lies in their implications for the speed and efficiency with which future audits must be conducted. Whereas the audit of baseline surveys for Site I and the preparation of audit reports occupied up to a year of elapsed time, future audit cycles must be compressed to six months at most if we are to stay current with the inexorable flow of data from the field.

Reviewing the experience of the past year, it seems to us that this compression is feasible, given tight management of the process. Much of the first year's effort was devoted to devising efficient production methods and finding solutions to unexpected problems; subsequent audits can draw on that experience and on the inventory of computer programs designed then. As an example of the difference that precedent makes in these matters, the preparation of a record condition indicator (supply response completeness) for the baseline survey of landlords in Site I required three months of elapsed time; for the same survey in Site II, the task was accomplished in three weeks.

At the end of September 1975, audits were complete on all baseline surveys for Site I except the survey of neighborhoods, and the audit reports were in various stages of draft.[8] The Data Systems Group was still in the process of developing its procedures for archiving final master files, so none have actually been archived. Over the next several months, it is essential that these final steps of the first audit cycle be completed so that DAG and DSG can give undivided attention to the baseline surveys for Site II, now emerging from cleaning.

Analysis and Reporting

Except for early studies based on screening survey records, analysis of primary data from the Supply Experiment began early in 1975, with the baseline survey of landlords in Site I. The first analytical report, on the structure and condition of the rental housing market there, was published in April; the second, an analysis of the characteristics of the capital stock of rental housing, was published in August.[9]

Drafts of reports on landlord characteristics and on rental incomes and expenses were in hand by the end of September; extracts from them are included in Sec. IV of this annual report. Reports based on the Site I baseline survey of tenants and homeowners (also abstracted in Sec. IV), on the survey of residential buildings, and on the activities and policies of market intermediaries were also in draft at the end of the period. Finally, the preparation of reports on the first year of allowance program operations in Site I was under way (see Sec. IV for abstracts).

Although the analysis of baseline data has proceeded very nearly on schedule and is now virtually complete, the preparation of reports is not. In some cases, first

[8] The *Screening Survey Audit Report for Site I* was published in November 1974 (The Rand Corporation, WN-8684-HUD).

[9] Rydell and Friedman, *Rental Housing in Site I: Market Structure and Conditions at Baseline;* and Rydell, *Rental Housing in Site I: Characteristics of the Capital Stock at Baseline.*

drafts have taken considerably longer to complete than we anticipated; but in others, they have been completed on schedule, only to be delayed by bottlenecks in review, revision, and production. We are concerned that the authors may find their attention split, in the coming months, between revisions to Site I baseline reports and analysis of Site II baseline data.

The publication delays noted above arise less from substantive problems with the analysis on which reports are based than from our attempts to ensure that the reports are lucid and readable, and that the statistical data they contain are well organized and impeccably documented. Although we expect to complete the publication cycle for reports based on Site I baseline data early in 1976, it is clear to us that our publication plans for the future can be realized only if we find ways to expedite drafting, review, revision, and production. Altogether, some 35 to 45 working notes are scheduled for completion each year, including the massive codebooks for each completed survey, which are prepared by the Survey Group.

Another problem, as yet unresolved, is the best mode for presenting findings of the Supply Experiment to the general public and the research community. HASE has so far published nearly a hundred working notes, some subsequently incorporated into larger documents or superseded in other ways. After consolidation, there remain 55, listed in Appendix A. Though all are necessary documentation either of plans, problems, methods, or findings, many are of limited interest to the public at large or even to the research community, dealing as they do with technical details of interest mainly to actual users of the data. We have not sought wide distribution of these working notes.

Annual reports such as the present one serve part of the important function of public reporting. In this report, we have sought to combine a history of the Supply Experiment's most recent year with an account of its current status and coming agenda; but also to summarize the most important experimental findings to date. In future years, the volume of data and of completed analysis will be larger, so that it will become increasingly difficult to do justice to the richness of the Supply Experiment's contribution to knowledge in this format. A series of more topical monographs, in which more technical exposition is possible, will also be required.

The pace of the HASE research schedule has so far militated against the preparation of monographs that summarize and build on the contents of relating working notes. The problem is not only unresolved but will intensify in coming years. Manifestly, there is considerable illogic in a research plan that underreports on data acquired at such great expense of money and dedicated personal efforts.

One possible solution is to create a separate staff, without operational responsibilities, whose function is to supply the concentrated editorial and superanalytical effort that is required to ensure timely production of well-written, tightly reasoned reports. This possibility among others will be explored during the months ahead.

PROSPECTS

In the course of preparing this second annual report of the Housing Assistance Supply Experiment, we have frequently consulted the first annual report, prepared in October 1974. We think that most readers of both documents will be struck, as we were, by the differences in their tone. Figuratively, the first annual report recounts a long and strenuous ascent over hazardous terrain and ends with first

glimpses of an easier and more hospitable land ahead. The present report describes the settlement of that land, the sowing and harvesting of crops, and the improvements that time and experience bring to cultivation in a new region.

The metaphor is perhaps highflown. At any rate, those of us who have participated from the beginning in what is perhaps the largest and most complex scientific social experiment ever mounted must be permitted our sense of accomplishment. But in describing the current phase of the experiment in terms of maturity, stability, and repetitive operations, we are also reminded of the dangers of such a peaceable existence. For the Supply Experiment to realize its potential contribution to federal housing policy and to social science generally, its staff must avoid somnolence, must stay alert to new problems and new possibilities for fruitful research.

We accept that responsibility.

Appendix A

HOUSING ASSISTANCE SUPPLY EXPERIMENT PUBLICATIONS

A research project that entails gathering and processing primary data requires a great deal of technical documentation, the external audience for which is limited to those who wish to probe deeply into the research methods. For the Supply Experiment, this documentation exists in the form of working notes, copies of which are permanently on file at Rand, HUD, and the National Technical Information Service. Because of their limited audience, they have not been published for general distribution, but can be made available to requestors on a case-by-case basis.

This appendix lists working notes that are currently available, many of which are cited in the text of the report. Some of these notes are scheduled for revision and publication as reports in the near future; when this occurs, the earlier working-note versions will generally be withdrawn.

REPORTS

R-1659-HUD, *First Annual Report of the Housing Assistance Supply Experiment,* October 1974.

WORKING NOTES

WN-7711-UI, *Testing the Supply Response to Housing Allowances: An Experimental Design,* Ira S. Lowry, C. Peter Rydell, and David M. de Ferranti, December 1971.

WN-7833-HUD, *Site Selection for the Housing Assistance Supply Experiment: Stage I,* Housing Assistance Supply Experiment Staff, May 1972.

WN-7866-HUD, *Preliminary Design for the Housing Assistance Supply Experiment,* Ira S. Lowry, June 1972.

WN-7883-HUD, *Preliminary Description of Survey Instruments,* Housing Assistance Supply Experiment Staff, June 1972.

WN-7885-HUD, *Data Management System: Part I, Fieldwork Data and Data Transfer Specifications,* Gerald Levitt, July 1972.

WN-7888-HUD, *Phase II: Price Controls and the Housing Assistance Supply Experiment,* David B. Lewis, July 1972.

WN-7907-HUD, *Site Selection for the Housing Assistance Supply Experiment: SMSAs Proposed for Site Visits (A Briefing),* Housing Assistance Supply Experiment Staff, August 1972.

WN-7953-HUD, *Data Management System: Part II, The Management of Data for Analysis,* Gerald Levitt, August 1972.

WN-7982-HUD, *Supplemental Design Papers for the Housing Assistance Supply Experiment,* Housing Assistance Supply Experiment Staff, July 1972.

WN-8028-HUD, *Housing Allowances and Household Behavior,* Ira S. Lowry, Mack Ott, and Charles W. Noland, January 1973.

WN-8029-HUD, *Sample Design for the Housing Assistance Supply Experiment,* Timothy M. Corcoran, Eugene C. Poggio, and Tiina Repnau, November 1972.

WN-8034-HUD, *Collected Site Selection Documents: Housing Assistance Supply Experiment,* Robert Dubinsky, January 1973.

WN-8054-HUD, *Data Management System for the Housing Assistance Supply Experiment,* Colleen M. Dodd, Misako C. Fujisaki, and Gerald Levitt, November 1972.

WN-8105-HUD, *Estimating the Standard Cost of Adequate Housing,* David B. Lewis and Ira S. Lowry, March 1973.

WN-8174-HUD, *The Effects of Nonresponse on Record Completion in a Panel of Residential Properties,* Timothy M. Corcoran, April 1973.

WN-8198-HUD, *General Design Report: First Draft,* Ira S. Lowry (ed.), May 1973.

WN-8201-HUD, *Sample-Selection Procedures for Site I,* Eugene C. Poggio, March 1973.

WN-8218-HUD, *The Role of Household Survey Data in the Supply Experiment,* Adele P. Massell (ed.), March 1973.

WN-8268-HUD, *Compensating for Landlord Nonresponse in the Housing Assistance Supply Experiment,* Adele P. Massell, June 1973.

WN-8350-HUD, *The Housing Allowance Program for the Supply Experiment: First Draft,* Robert Dubinsky (ed.), August 1973.

WN-8364-HUD, *General Design Report: Supplement,* Ira S. Lowry (ed.), August 1973.

WN-8396-HUD, *Proceedings of the General Design Review of the Housing Assistance Supply Experiment,* October 1973.

WN-8439-HUD, *Estimates of Eligibility, Enrollment, and Allowance Payments in Green Bay and Saginaw: 1974 and 1979,* Barbara M. Woodfill, Tiina Repnau, and Ira S. Lowry, September 1973.

WN-8468-HUD, *Neighborhoods in Brown County,* Bryan Ellickson, November 1973.

WN-8489-HUD, *Funding Homeowner Assistance in the Supply Experiment: Problems and Prospects,* Ira S. Lowry, November 1973.

WN-8547-HUD, *Program Size and Cost for Site I: New Data from the Screener Survey,* Ira S. Lowry, Barbara M. Woodfill, and Tiina Repnau, December 1973.

WN-8574-HUD, *Program Standards for Site I,* Ira S. Lowry, Barbara M. Woodfill, and Tiina Repnau, January 1974.

WN-8577-HUD, *Market Intermediaries and Indirect Suppliers: Baseline Report and Prospectus for Site I,* William G. Grigsby, Michael G. Shanley, and Sammis B. White, February 1974.

WN-8588-HUD, *Sample Selection Procedure for St. Joseph County, Indiana,* Sandra H. Berry, Daniel A. Relles, and Eugene Seals, January 1974.

WN-8611-HUD, *Baseline Data Systems Design, Implementation, and Operations Report,* Gerald Levitt (ed.), March 1974.

WN-8612-HUD, *Baseline Audit Plan,* Leonard G. Chesler and others, February 1974.

WN-8623-HUD, *Sampling Nonresidential Properties: Site I,* Timothy M. Corcoran, March 1974.

WN-8640-HUD, *Survey Sample Design for Site I,* Timothy M. Corcoran, March 1974.

WN-8682-HUD, *Characteristics of the Residential Baseline Survey Samples for Site I,* Tiina Repnau, May 1974.

WN-8684-HUD, *Screening Survey Audit Report for Site I,* David M. de Ferranti, Ira S. Lowry, and others, November 1974.

WN-8687-HUD, *Accounting and Auditing Procedures for Rental Property Financial Data,* Therman P. Britt, August 1974.

WN-8688-HUD, *The Screening Survey Instrument and Supplementary Forms: Site I,* HASE Survey Group, July 1974.

WN-8689-HUD, *Interviewer Training Manual for the Site I Screening Survey,* HASE Survey Group, October 1974.

WN-8715-HUD, *Equity and Housing Objectives in Homeowner Assistance,* Ira S. Lowry, June 1974.

WN-8810-HUD, *Codebook for the Baseline Survey of Residential Buildings in Site I,* Ann W. Wang and Charles W. Noland, February 1975.

WN-8819-HUD, *Index to the Site I Maps,* Doris Dong, August 1974.

WN-8974-HUD, *Program Standards for Site II,* Ira S. Lowry, Barbara M. Woodfill, and Marsha A. Dade, February 1975.

WN-8976-HUD, *Codebook for the Baseline Landlord Survey in Site I,* Ann W. Wang, Doris Crocker, and Stephanie Schank, March 1975.

WN-8978-HUD, *Rental Housing in Site I: Characteristics of the Capital Stock at Baseline,* C. Peter Rydell, August 1975.

WN-8980-HUD, *Rental Housing in Site I: Market Structure and Conditions at Baseline,* C. Peter Rydell and Joseph Friedman, April 1975.

WN-8999-HUD, *The Section 8 Housing Assistance Program: Notes on Eligibility and Benefits,* Barbara M. Woodfill, February 1975.

WN-9015-HUD, *Brown County Press Coverage of the Housing Assistance Supply Experiment and the Allowance Program: December 1972-December 1974,* Earl Carter (compiler), March 1975.

WN-9016-HUD, *South Bend Press Coverage of the Housing Assistance Supply Experiment and the Allowance Program: January 1974-December 1974,* Earl Carter (compiler), March 1975.

WN-9026-HUD, *Market Intermediaries and Indirect Suppliers: Reconnaissance and Research Design for Site II,* William G. Grigsby, Michael G. Shanley, and Sammis B. White, May 1975.

WN-9027-HUD, *Selecting the Baseline Sample of Residential Properties: Site II,* Daniel A. Relles, October 1975.

WN-9051-HUD, *Monitoring the Experiment: An Update of Sec. IV of the General Design Report,* Ira S. Lowry, April 1975.

WN-9070-HUD, *The Experimental Housing Allowance Program: An Update of Sec. III of the General Design Report,* Ira S. Lowry, April 1975.

WN-9098-HUD, *Introduction and Overview: An Update of Secs. I and II of the General Design Report,* Ira S. Lowry, May 1975.

WN-9211-HUD, *A Plan for Analyzing Nonresponse Bias: Survey of Landlords, Baseline, Site I,* C. Peter Rydell and Richard E. Stanton, August 1975.

WN-9292-HUD, *HASE Data Systems: The HASE Audit and Analysis Support Package (HAASP),* Eric Harslem and Michel Rogson, November 1975.

Appendix B

CHRONOLOGY OF MAJOR EVENTS

Table B-1

CHRONOLOGY OF MAJOR EVENTS IN SITE I: HOUSING ALLOWANCE PROGRAM

Date	Event
	1972
18 December	• Rand appoints site manager for Brown County.
22 December	• HUD tentatively designates Brown County as an experimental site, based on progress in negotiating memoranda of understanding with the major units of local government.
	1973
21 February	• Brown County board of supervisors approves a memorandum of understanding with HUD and establishes the Brown County Housing Authority (BCHA) as an agency empowered to enter into an annual contributions contract (ACC) with HUD under Sec. 23.
5 March	• Rand opens a site office in Green Bay.
15 May	• First meeting of the BCHA.
4 June	• BCHA approves a memorandum of understanding with HUD concerning the purposes and organization of the experimental housing allowance program.
19 October	• Housing Allowance Office (HAO) of Brown County is incorporated as a nonprofit organization under the laws of the State of Wisconsin. Incorporators appoint director and deputy director of the HAO.
14 December	• HAO board of trustees adopts bylaws, elects officers, and ratifies appointments of HAO director and deputy director.
24 December	• HAO acquires temporary quarters in Green Bay.
	1974
4 January	• Rand submits drafts of final sections of HAO handbook to HUD.
18 February	• BCHA formally submits application for annual contributions contract to HUD, accompanied by resolutions of approval from 20 units of local government in Brown County.
11 March	• BCHA approves allowance program standards promulgated by HUD.

14 March	•	HUD and BCHA execute annual contributions contract. BCHA and HAO execute agreement delegating program operations to the HAO.
29 March	•	HAO tests enrollment and housing certification procedures with small number of invited applicants.
6 May	•	HUD conducts HAO operational readiness review.
21 May	•	HUD approves HAO operating budget.
29 May	•	HUD and BCHA deliver first installment of ACC funds to HAO.
12 June	•	HUD approves participation manual and form of participation agreements for renters and homeowners.
13 June	•	Advisory committee of local officials and citizens formed. First meeting held.
17 June	•	HAO completes first formal enrollment (signed participation agreement).
19 June	•	HAO invites applications for enrollment from the general public and makes first payment to allowance recipient.
10 October	•	HAO moves into permanent quarters in Green Bay.
14 October	•	HAO begins active outreach, including newspaper and radio advertising.
26 November	•	Number of households enrolled reaches 1,000.
		1975
24 January	•	Number of households receiving payments reaches 1,000.
20 February	•	Number of households enrolled reaches 2,000.
4 April	•	HAO begins first semiannual recertification cycle.
14 May	•	Number of households receiving payments reaches 2,000.
6 June	•	Number of households enrolled reaches 3,000.
19 June	•	Beginning of second year of open enrollment. HAO begins first annual recertification cycle and first annual housing reevaluation cycle.
14 July	•	HAO opens field office on the west side of Green Bay.
24 July	•	Number of housing units upgraded to program standards reaches 1,000. Cumulative housing allowance payments reach $1 million.
9 August	•	HAO begins television advertising to supplement newspaper and radio advertising.

Table B-2

CHRONOLOGY OF MAJOR EVENTS IN SITE I: RESEARCH PROGRAM

Date	Event
	1973
1 February	• Mathematica opens site office in Green Bay.
13 March	• Rand completes plan for survey sample selection.
23 April	• Mathematica commences tax office search for parcel data required for sample selection.
6 August	• Rand releases screening survey sample list of residential properties to Mathematica.
26 August-13 October	• Mathematica conducts screening survey of occupants of 10,500 housing units.
19 October	• Rand completes coding, keypunching, and cleaning of 8,646 completed screening survey questionnaires and compiles master file for baseline sample selection.
16 October-21 December	• Mathematica conducts baseline survey of 6,750 residential buildings.
11 November-18 December	• Rand releases baseline sample list to Mathematica in installments.
10 December-31 March 1974	• Mathematica conducts baseline survey of landlords of 3,115 rental properties.
12 December-30 April 1974	• Mathematica conducts baseline survey of 6,319 tenants, 1,412 homeowners, 264 lodgers, and 147 occupants of mobile homes.
27 December-11 January 1974	• Mathematica conducts baseline windshield survey of 8,660 street segments in 108 neighborhoods.
	1974
10 January	• Rand publishes first analysis of screening survey data (WN-8574-HUD).
31 January	• Rand releases baseline sample list of nonresidential properties to Mathematica.
3 March-8 April	• Mathematica conducts baseline survey of owners of 378 nonresidential properties.
15 March	• Rand releases baseline sample list of seasonal properties to Mathematica.
3 April-19 April	• Mathematica conducts baseline survey of owners of 250 seasonal properties.

15 June	•	Mathematica completes baseline survey cleanup; closes site office.
1 July	•	Mathematica delivers field record management materials to Rand.
5 August-18 November	•	Rand publishes codebook materials for screening survey (WN-8688-HUD, WN-8689-HUD).
20 August	•	Rand completes accountability review on all major surveys.
16 September	•	Rand completes coding, keypunching, and cleaning of 6,751 field observation forms from the survey of residential buildings.
20 September	•	Rand releases sample list for Wave 2 fieldlisting of selected residential properties.
24 September-9 October	•	NORC conducts Wave 2 fieldlisting of 275 residential properties.
4 October	•	Rand completes coding, keypunching, and cleaning of 2,116 questionnaires from the baseline survey of landlords.
17 October	•	Rand releases field materials for Wave 2 landlord quest.
18 October	•	Rand completes coding, keypunching, and cleaning of 8,064 field observation forms from the baseline survey of neighborhoods.
18 October-13 December	•	NORC conducts Wave 2 landlord quest for 1,620 residential properties.
25 November	•	Rand publishes audit report on screening survey (WN-8684-HUD).
18 December	•	Rand selects permanent panel of 1,945 residential properties, 2,074 residential buildings, and 3,288 housing units from among those with complete baseline records.
		1975
11 January	•	Rand releases sample list for Wave 2 survey of tenants and homeowners.
15 January	•	Rand completes coding, keypunching, and cleaning of 108 local sources data forms from the baseline survey of neighborhoods.
15 January	•	Rand compiles preliminary master file of field observation records for the baseline survey of neighborhoods.
16 January	•	Rand completes coding, keypunching, and cleaning of 3,976 questionnaires from the baseline surveys of tenants, homeowners, lodgers, and occupants of mobile homes.
20 January-30 September	•	NORC conducts Wave 2 survey of 2,973 tenants and 685 homeowners.

3 February	• Rand compiles preliminary master file for the baseline survey of landlords.
13 February	• Rand compiles preliminary master file for the baseline survey of residential buildings.
22 February	• Rand compiles preliminary master file for the baseline surveys of tenants and homeowners.
3 March	• Rand compiles preliminary master file for the local sources records of the survey of neighborhoods.
7 March	• Rand publishes codebook for the baseline survey of residential buildings (WN-8810-HUD).
26 March	• Rand publishes codebook for the baseline survey of landlords (WN-8976-HUD).
1 April	• Rand releases sample list for Wave 2 survey of landlords.
21 April-30 September	• NORC conducts Wave 2 survey of landlords of 1,316 rental properties.
8 May	• Rand publishes first analysis of the baseline survey of landlords (WN-8980-HUD).
16 June	• Rand releases preliminary sample list for Wave 2 panel augmentation (new construction sample).
23 June-30 June	• NORC conducts Wave 2 fieldlisting of 136 newly constructed residential properties.
15 July	• HAO delivers administrative records for first year of program operations to Rand.
30 July	• Rand releases sample list for Wave 2 survey of residential buildings.
8 August-30 October	• NORC conducts Wave 2 survey of 2,714 residential buildings.
26 August	• Rand releases final sample list for Wave 2 panel augmentation (new construction sample).
26 August-1 November	• NORC conducts Wave 2 surveys of landlords, tenants, homeowners, and residential buildings for 65 properties in the new construction sample.
5 September	• Rand compiles preliminary master file for the baseline surveys of lodgers and occupants of mobile homes.
15 September-30 September	• NORC pretests instrument for Wave 3 survey of tenants and homeowners.
22 September	• Rand compiles preliminary master file of client characteristics from HAO records for first year of program operations.
22 September	• Rand releases sample list for Wave 3 fieldlisting of selected residential properties.
24 September	• NORC begins Wave 3 fieldlisting for 414 residential properties.

Table B-3

CHRONOLOGY OF MAJOR EVENTS IN SITE II: HOUSING ALLOWANCE PROGRAM

Date	Event
	1974
28 January	• South Bend common council approves a memorandum of understanding with HUD concerning the purposes and organization of the housing allowance program.
8 April	• HUD designates St. Joseph County as an experimental site despite failure to secure participation of Mishawaka and the remainder of the county.
13 May	• Rand appoints site manager for St. Joseph County.
15 July	• Rand opens site office in South Bend.
25 July	• Housing Allowance Office (HAO) is incorporated as a nonprofit organization under the laws of the State of Indiana.
8 August	• First meeting of HAO board of trustees. Board adopts bylaws and elects officers.
14 August	• South Bend Housing Authority (SBHA) formally submits application for annual contributions contract (ACC) to HUD, accompanied by a resolution of approval from the South Bend common council.
5 September	• HAO board of trustees appoints HAO director and deputy director.
6 September	• HUD and SBHA execute annual contributions contract. SBHA and HAO execute agreement delegating program operations to the HAO.
16 September	• HAO acquires temporary quarters in South Bend.
27 September	• HUD approves operating budget for the HAO.
27 September	• First meeting of HAO advisory committee of public officials and citizens.
3 October	• HUD and SBHA deliver first installment of ACC funds to the HAO.
15 October	• Rand submits draft of HAO handbook to HUD.
29 November	• HAO completes hiring for supervisory staff.
5 December	• HUD conducts operational readiness review.
12 December	• HAO begins invitational enrollment of homeowners.
16 December	• HAO handbook approved by chairman of the board of trustees.
27 December	• HAO completes first formal enrollment and payment authorization.
31 December	• HAO moves into permanent quarters in South Bend.

		1975
2 April	•	HAO invites applications for enrollment from the general public.
26 June	•	St. Joseph County and SBHA agree to expand program jurisdiction to include unincorporated territory within five miles of South Bend.
July	•	Number of households enrolled reaches 1,000.
10 August	•	HAO begins active outreach, including newspaper, radio, and television advertising.
11 August	•	St. Joseph County council endorses the allowance program.
14 August	•	Roseland town council votes to participate in allowance program.
September	•	Number of households enrolled reaches 2,000.
22 September	•	Number of households receiving payments reaches 1,000.

Table B-4

CHRONOLOGY OF MAJOR EVENTS IN SITE II: RESEARCH PROGRAM

Date		Event
		1974
30 January	•	Rand completes preliminary design for sample selection (WN-8588-HUD) and obtains list of tax parcels in St. Joseph County.
1 May-3 July	•	Rand conducts tax record search for data on 40,894 properties.
16 May	•	Westat opens site office in South Bend.
24 June-9 August	•	Rand releases screening survey sample list of housing units to Westat in installments.
10 July-6 September	•	Westat conducts screening survey of occupants of 9,976 housing units.
23 July-23 September	•	Rand codes, keypunches, and cleans 6,066 completed screening survey questionnaires.
18 September-28 November	•	Westat conducts baseline windshield survey of 12,136 street segments in 86 neighborhoods.

11 November	•	Rand releases sample list for baseline survey of landlords.
18 November	•	Rand releases sample list for baseline survey of tenants and homeowners.
25 November-20 June	•	Westat conducts baseline surveys of landlords of 3,528 rental properties, 5,803 tenants, and 1,415 homeowners.
2 December	•	Rand compiles preliminary master file of screening survey records.
		1975
21 April	•	Rand releases sample list for baseline survey of residential buildings.
25 April-2 July	•	Westat conducts baseline survey of 5,074 residential buildings.
25 June	•	Rand releases sample list for baseline verification survey of nonresidential properties.
6 August-22 August	•	Westat conducts baseline verification survey of 543 nonresidential properties.
31 August	•	Rand completes coding, keypunching, and cleaning of 1,922 questionnaires from the baseline survey of landlords.
8 September-8 October	•	Westat conducts tax record search for data on 4,943 residential properties.
22 September	•	Rand releases sample list for Wave 2 fieldlisting of selected residential properties.
24 September	•	Westat begins Wave 2 fieldlisting for 600 residential properties.

Appendix C

ORGANIZATION OF THE HOUSING ASSISTANCE SUPPLY EXPERIMENT

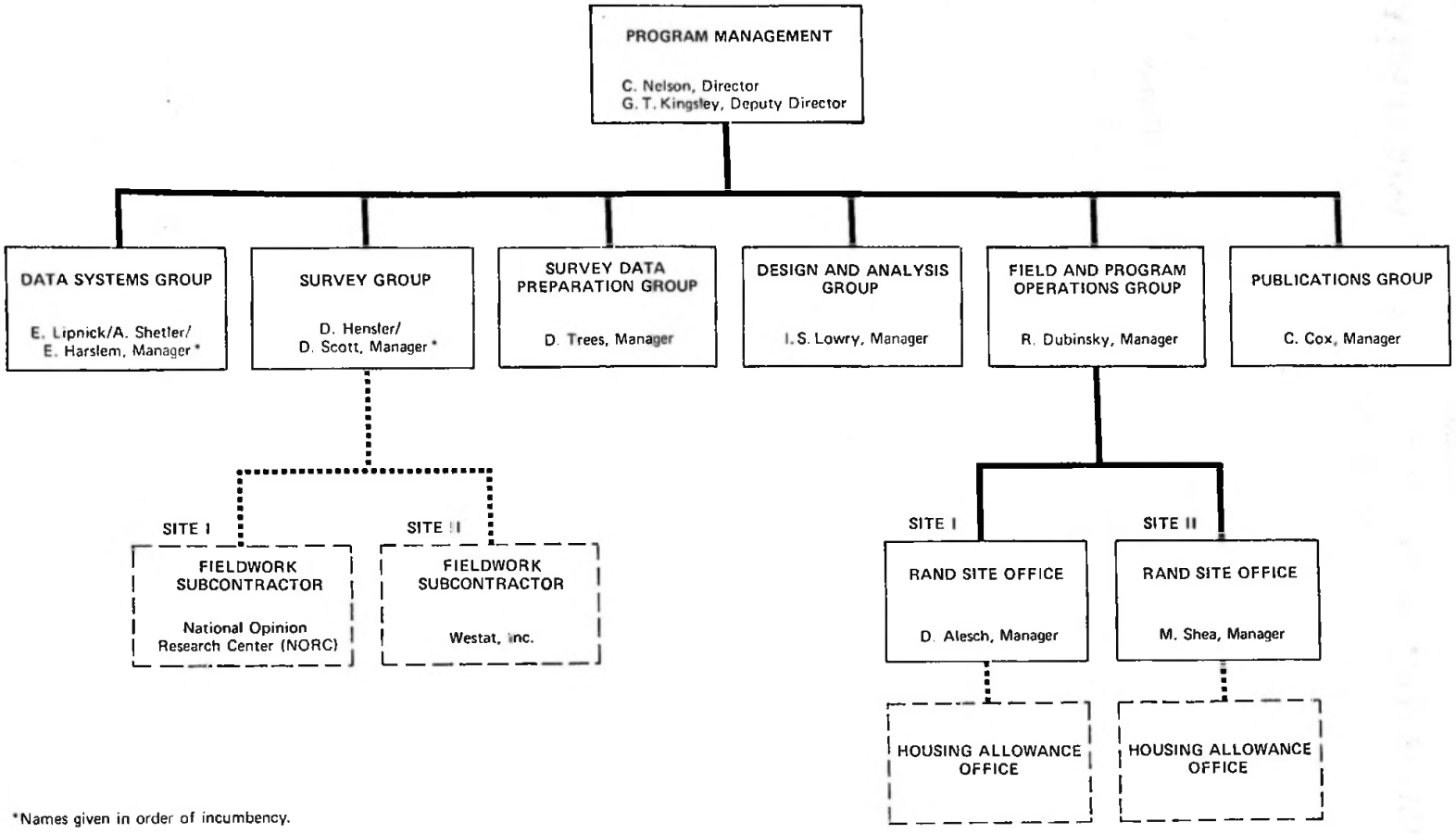
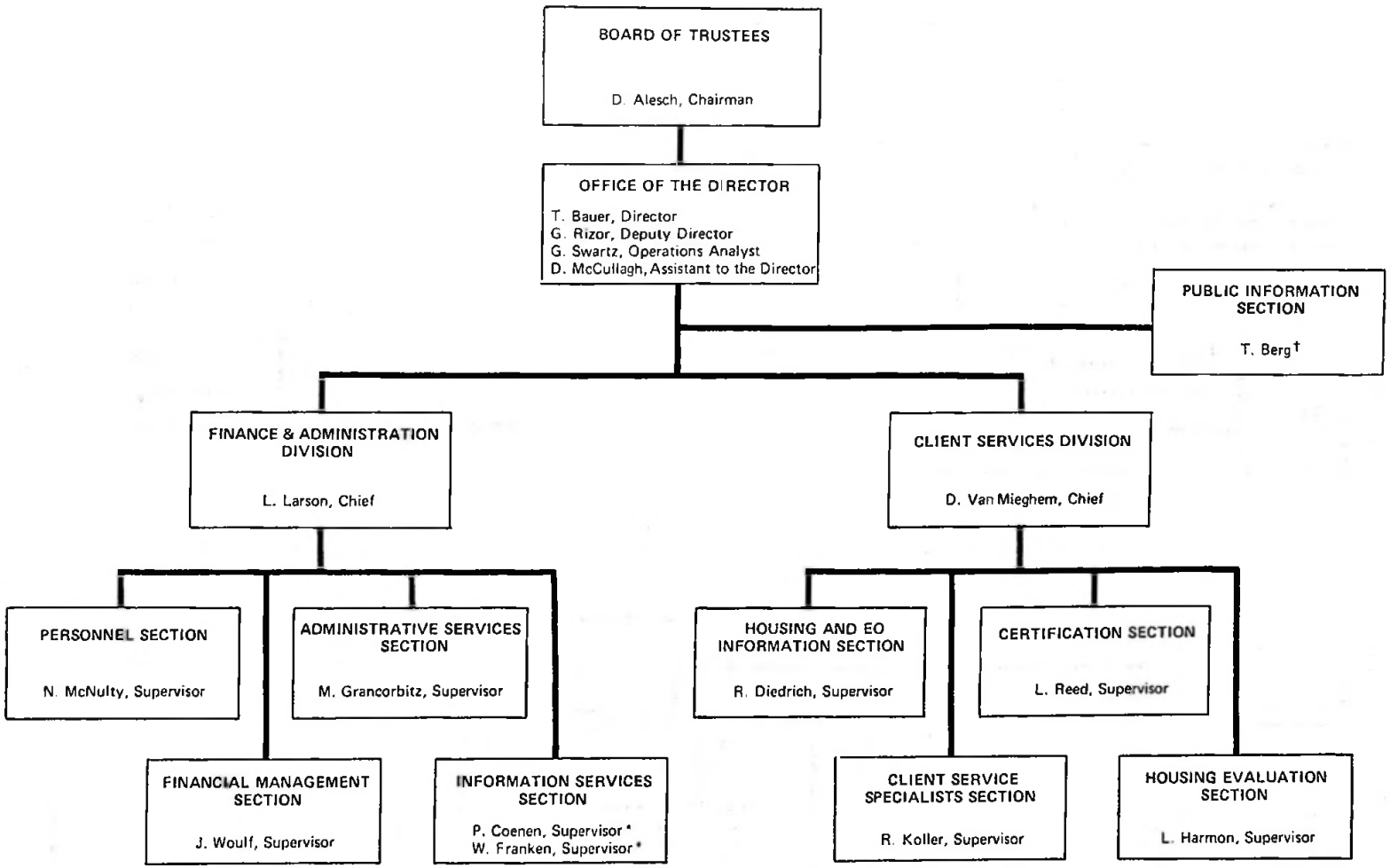
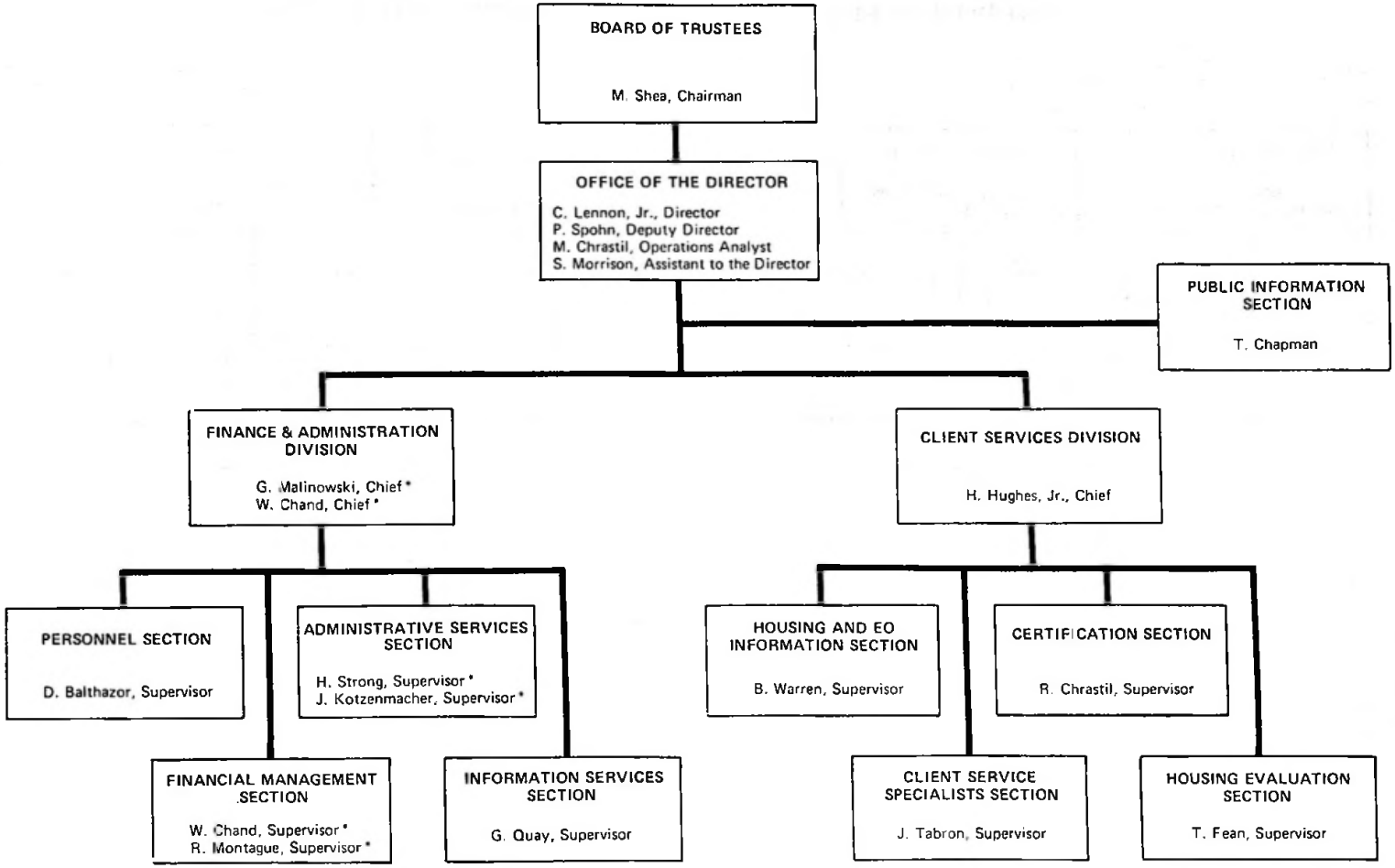


Fig. C-1—Rand's project organization for HASE, October 1974-September 1975



†Until June 1975; position now vacant.
*Names given in order of incumbency.

Fig. C-2—Organization of the Housing Allowance Office for Brown County (Site I), October 1974-September 1975



*Names given in order of incumbency.

Fig. C.3—Organization of the Housing Allowance Office for South Bend (Site II), October 1974-September 1975

Appendix D

RAND'S STAFF FOR THE HOUSING ASSISTANCE SUPPLY EXPERIMENT

October 1974–September 1975

The Housing Assistance Supply Experiment began its formal existence in April 1972 with a staff of ten professionals engaged in planning the experiment and screening potential sites. By September 1974, when the experiment was under way in two sites and a large volume of field survey data was being processed, the staff had grown to the equivalent of about 110 fulltime employees. They were located in Rand's offices in Washington, D.C.; Santa Monica, California; Green Bay, Wisconsin; and South Bend, Indiana. Since then, the number has fluctuated with seasonal workloads but remains in the range of 100 to 120 fulltime equivalents.

Slightly more than half the staff are professionally rated employees or consultants, most of them working full time on the project. The remainder provide the administrative, clerical, data preparation, and secretarial services without which such a project could not function.

In the following pages, we have tried to list the professional staff of the project during the year covered by this report* and to indicate at least the main responsibilities or contributions of each member. Because responsibilities and job titles change continuously in response to shifts in workload and the professional growth of staff members, it is difficult to give as clear a picture as we would like of the contributions of each person.

To simplify these lists, several conventions have been observed. First, only professionally rated employees and consultants are included. While the nonprofessional support staff has been indispensable, turnover, changes of assignment, and division of effort between this project and others makes a listing of such individuals well-nigh incomprehensible. Second, where names are grouped by function, they are listed alphabetically and the persons listed thus were not necessarily all working concurrently at the indicated tasks. Third, some individuals are listed in more than one place, reflecting concurrent or successive assignments. Fourth, the incumbents of a few key positions are listed in order of incumbency rather than alphabetically.

Many more persons than are listed have contributed in significant ways to the Housing Assistance Supply Experiment. However, those listed have borne the daily brunt of problem resolution and schedule pressures, for which they deserve special recognition. On this basis, we have included the names of our fieldwork subcontractors and their key personnel.

The Housing Allowance offices in our two experimental sites are corporate entities separate from The Rand Corporation. Their principal officers as of September 1975 are named in Appendix C.

* See the *First Annual Report,* Appendix D, for staffing during earlier phases of the experiment.

STAFF FOR PHASE II
OCTOBER 1974-SEPTEMBER 1975

PROGRAM MANAGEMENT

Program Director
Charles E. Nelson

Deputy Director
G. Thomas Kingsley

Program Control Officer
Hal Moursund

Program Control Assistant*
Antoinette Dickenson
Priscilla Schlegel

FIELD AND PROGRAM OPERATIONS GROUP

Manager
Robert Dubinsky

Deputy Manager
Robert Tabor

Staff
Deborah R. Both
Earl Carter
Stacy Gamble
Hal Moursund
Paul Tebbets
Karen Goldfarb Watson

Consultant
Alan Greenwald

SITE I STAFF

Site Manager
Daniel Alesch

Site Monitors
Kirk Gray
Paul Ernst (HAO)

SITE II STAFF

Site Manager
Michael F. Shea

Deputy Site Manager
Thomas Weeks

Site Monitors
Michael Shanley
Nancy O'Nell (HAO)

*In order of incumbency

DESIGN AND ANALYSIS GROUP

Manager
Ira S. Lowry

Deputy Manager
Planning and Coordination
Leonard G. Chesler[a]
John Enns[b]

Administrative Assistant
Teresa E. Barrett

Experimental Design and Analysis Plans

Supply Response
C. Lance Barnett
C. Peter Rydell

Market Intermediaries
William G. Grigsby
Michael Shanley
Sammis B. White

Residential Mobility
Joseph Friedman
Kevin F. McCarthy

Community Attitudes
Phyllis Ellickson

Housing Allowance Program
Marsha A. Dade†
Iao M. Katagiri
Charles W. Noland
Barbara M. Woodfill†

Survey Sample Design and Selection
Timothy M. Corcoran†
William J. Granoff
Daniel A. Relles*
Tiina Repnau

Local Data Sources and Site Monitoring
Phyllis Ellickson
Albert H. Rosenthal

Survey Audit and Analysis Teams

Screening Surveys
Marsha A. Dade
William L. Dunn*

Surveys of Landlords
Therman Britt
Masaaki Komai
C. Peter Rydell†
Richard Stanton

Surveys of Tenants and Homeowners
Phyllis Ellickson
Joseph Friedman
Lawrence Helbers
Kevin F. McCarthy†

Surveys of Residential Buildings
Larry A. Day
Charles W. Noland

Surveys of Neighborhoods
William J. Granoff

Survey Codebooks
Ann W. Wang

[a]Through July 1975.
[b]Beginning September 1975.
*Leader, Site II.
†Leader, both sites.

SURVEY GROUP

Manager
Deborah R. Hensler[a]
Douglas Scott[b]

Assistant Manager, Survey Operations
Zahava Blum-Doering

Assistant Manager, Instrument Design
Sandra H. Berry

Instrument Production Unit
Nancy A. Hope*
Charlotte Goff

Administrative Assistant
Marcia J. Lewis

Codebook Design
Carmen Wilson

Research Assistants
Patricia Ebener
Jennifer A. Hawes
Susan W. Luxenberg
Eve Savage

Site I, Wave 2 Surveys

National Opinion Research Center

Project Director
Eve Weinberg

Field Director
Shirley M. Knight

Site Manager
Mary Ann Fitzgerald

Site II, Baseline Surveys

Westat, Inc.

Project Director
Stephen Dietz

Site Manager
Oscar L. Powers

[a]Through August 1975.
[b]Beginning September 1975.
*Supervisor

DATA SYSTEMS GROUP

Manager

Edward H. Lipnick[a]
Antoinette C. J. Shetler[b]
Eric F. Harslem[c]

Administrative Assistant

Jan L. Butler

Audit and Analysis

Susan C. Augusta
M. A. "Jean" Bedell
Joan C. Black
Donna R. Cooper
Wade H. Harrell
M. Dolph Hatch
Cheryl A. Jackson
Richard W. Kellogg
Carol A. Medine*
Joel D. Sender
Robert J. Young

Record Management System

Sharon K. Anderson
David A. Beerman
Colleen M. Dodd
Carol A. Edwards
James S. Reiley*
Alice M. Way

Sample Selection

Sharon K. Anderson
David A. Beerman
Eugene Seals*
Edward M. Woo

Postbaseline System

Charles H. Bush
Edward M. Fairbrother
Edward H. Lipnick
Eric F. Harslem*
Robert L. Patrick
Michel M. Rogson
Michael L. Wahrman

Project Accounting System

Jan L. Butler
Susan G. Kachner
Robert L. Patrick*
Richard L. Tracy
Ferris E. Trimble

Data Administration

Edward M. Fairbrother*
Shirley J. Lee

[a] Through June 1975.
[b] Acting manager, July 1975.
[c] Since August 1975.
* Leader.

SURVEY DATA PROCESSING GROUP

Manager
Donald P. Trees

Data Coding and Editing

Supervisor
Doris Crocker

Staff
Donna Christensen
Elizabeth Davidson
Loring Emile
Janis Lenox
Douglas Miller

Data Control and Computer Operations

Supervisor
Diane Fanelli

Staff
Janet Bandur
Janet Boothe
Tom Davis
Christie S. Harslem
Michael J. Hunter
Susan Huddlestone
Caroline Insley
Inge Leunig
Jim Neelands
Greg Pitman
Linda Winter

PUBLICATIONS GROUP

Managing Editor
Charlotte Cox

Cartography and Graphics
Doris Dong