

FIRST 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

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.

DEPARTMENT OF HOUSING
AND URBAN DEVELOPMENT

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Rand
SANTA MONICA, CA. 90406

PREFACE

This report was prepared for the Office of Policy Development and Research, U.S. Department of Housing and Urban Development (HUD). It summarizes the design of the Housing Assistance Supply Experiment sponsored by that agency as part of its Experimental Housing Allowance Program and recounts the history of the project since it was first considered in the fall of 1971. Special attention is given to the implementation phase of the experiment, which began in March 1973 and will continue into 1981. The report describes the achievements of the housing allowance program and its associated research program through September 1974; discusses the current problems of both programs; and explains their schedules of future events. The report is designed to assist HUD in reporting on the Supply Experiment to Congress and to the public, and to contribute to the historical record of the experiment.

The design and implementation of the Supply Experiment has entailed 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; Mathematica, Inc., Westat, Inc., and the National Opinion Research Center, all field survey subcontractors for the experiment; local governments in Brown County, 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 on material prepared by Rand's staff for the Supply Experiment over a period of nearly three 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. 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 or HUD 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.

The report was written principally by Ira S. Lowry, manager of the Supply Experiment's Design and Analysis Group. Barbara M. Woodfill assisted at every stage of report preparation, but especially in organizing the statistical materials presented in Sec. IV. Doris Dong prepared the graphics. Other members of the HASE professional staff assisted in their areas of expertise or reviewed draft material, suggesting many improvements in the text. They include the program director, Charles E. Nelson; his deputy, G. Thomas Kingsley; and the other group managers,

Edward H. Lipnick (Data Systems), Deborah R. Hensler (Surveys), Donald P. Trees (Survey Data Preparation), and Robert Dubinsky (Field and Program Operations), as well as members of the research staff.

The complete draft was reviewed by Gene Fisher, head of Rand's Management Sciences Department; Barbara Williams, Rand's deputy vice-president for domestic programs; and Gilmer Blankespoor of HUD, government program manager for the Supply Experiment. All made numerous useful suggestions.

The draft of the report was typed by Linda Ellsworth, Mike Griego, Geraldine Jaimovich, and Charlotte Sato and was proofread by Teresa Barrett, who also helped manage the flow of work. Charlotte Cox edited the report and supervised its production. Typeset copy was prepared under the direction of Janet DeLand. Sheila Byrne assisted with proofreading.

This report was prepared pursuant to Modification No. 18 of HUD Contract H-1789 and fulfills the requirements of Task 2.13 as set forth in Sec. III of that modification.

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 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.

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 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, its jurisdiction (at least initially) is limited to South Bend, but the housing market of the entire county is being monitored.

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 a federal program) 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 on the participant's initiative and on normal market processes. The amount of the allowance is usually 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?

PROGRESS IN SITE I

Brown County, Wisconsin, was designated as the first experimental site at the end of 1972. During the first half of 1973, plans and procedures were worked out for both the allowance program and the research program there. Samples were selected and baseline fieldwork was performed during the latter half of 1973 and the first half of 1974. The HAO accepted its first few applications in March 1974 and began open enrollment in June. At the end of September 1974, 454 households were enrolled in the program, with plans laid to increase that number by 350 to 400 households per month until the ACC ceiling of 6,096 households is reached or until the pool of eligible and interested households is exhausted. (Rand estimates that there are over 12,000 eligible households in Brown County but expects that only about 60 percent will seek to enroll.)

Those enrolled and receiving payments at the end of September 1974 were about equally divided as to tenure (renters and homeowners) and also as to age of household head (over or under 62 years). Annual gross incomes averaged \$4,073 for renters and \$5,113 for homeowners. Average monthly allowance entitlements were \$55 for renters and \$51 for homeowners. (The amount of entitlement reflects both income and household size.)

Response to the baseline surveys of landlords, tenants, and homeowners was generally good, and most of the survey records have been made machine-readable and cleansed of errors and ambiguities. Files for each survey are currently being audited and analyzed; various reports of survey findings are scheduled for completion in the first half of 1975.

Properties with complete baseline survey records are eligible for the "permanent" panel of about 2,000 residential properties, now being selected. The second wave of field observations and interviews is scheduled from January through May of 1975. These surveys will provide the first systematic evidence of the program's effects on the local housing market.

PROGRESS IN SITE II

St. Joseph County, Indiana, was not selected as the second site for the Supply Experiment until April 1974. Although the entire county was invited to participate in the program, only the city of South Bend (with half the county's population) has so far accepted. Thus, enrollment in the program will be open only to South Bend residents unless other jurisdictions later join.

During the summer of 1974, the Housing Allowance Office for South Bend was organized and work leading to the baseline field surveys was undertaken. By the end of September, all the necessary contractual and funding arrangements for the allowance program had been completed and key staff had been recruited for the HAO. A low level of invited enrollment is scheduled to begin in December, while the baseline surveys are still in progress. Open enrollment is scheduled to begin late in March 1975, after baseline interviewing is completed.

The Annual Contributions Contract for Site II provides for enrollment of up to 9,638 households, a figure that is not likely to be reached unless the remaining jurisdictions of the county join the program. Rand estimates that South Bend has about 10,500 eligible households, of which about 1,000 already live in housing subsidized under other federal programs. Excluding these, and allowing for those who do not choose to participate, as many as 6,300 households in South Bend may enroll.

HOUSING-MARKET CONTRASTS

Although each local housing market in the nation is in some way unique, there are several common configurations of characteristics that are likely to govern the local effects of a housing allowance program. In selecting experimental sites, two contrasting configurations of market characteristics were sought. One was a community with a rapidly growing urban core and a population free from the social and political strains of ethnic differences. The other was a community with a declining urban core and a substantial ethnic minority within its population. By one system of measurement, these two types each account for over a fourth of the nation's metropolitan areas, and the second alone accounts for half of the metropolitan population.

Considering also other features of each place, Brown County was selected as typical of the first class of places and St. Joseph as typical of the second. However, it should be noted that resource constraints excluded from consideration those metropolitan housing markets whose populations exceeded 250,000 persons. Brown County is the smaller site, with 158,000 residents (44,000 households) in 1970, as compared with St. Joseph County's 245,000 residents (76,000 households). The two counties are similar in climate and topography, and each has a single urban center composed of a large central city and adjacent smaller urban jurisdictions, set in an agricultural hinterland.

Neither site has the tenure pattern nor the residential density that is characteristic of the nation's largest metropolitan areas. Even in the central cities of the two sites, more than two-thirds of the housing units are owner occupied, and a still larger fraction are single-family houses. However, the sites differ markedly in other ways that are likely to affect the results of the experimental allowance programs.

The population of Brown County is growing rapidly, most of the growth occurring in its central city and the adjoining suburbs. The county's industries are cyclically stable and employment has grown steadily in recent years. Because of the steady pace of growth, the housing market is persistently tight, particularly in the urban core; in 1970, the rental vacancy rate was 4.3 percent in Green Bay and 6.6 percent in the remainder of Brown County. Residential construction is active; rents and home prices have increased about 10 percent annually since 1970. Because of

its ethnic homogeneity, Brown County has virtually no residential segregation; nor are there any large neighborhoods of badly deteriorated housing. Its principal housing problem is the inability of many households, especially those consisting of elderly persons on relatively fixed incomes, to cope with inflation in housing costs.

In contrast, St. Joseph County's population has grown very little since 1960; the population of South Bend actually decreased between 1960 and 1970. Since the end of World War II, the county's once-flourishing economic base of employment in heavy manufacturing has declined by more than 40 percent. Further, the manufacturing jobs that remain are cyclically unstable. Outmigration from the county has been substantial.

These circumstances have generally depressed the local housing market and particularly the market within South Bend. In 1970, the rental vacancy rate was 8.2 percent in South Bend and 4.8 percent elsewhere in the county. There has been relatively little new construction for over a decade; much of the new housing consists of federally assisted or at least federally insured rental units, including some large garden-apartment complexes in the suburbs.

South Bend's housing problems have been exacerbated by the segregation of its growing black population (amounting to 14 percent of the city's total population in 1970) and the loss of white residents to suburban jurisdictions. The black neighborhoods and adjoining areas contain mostly small frame houses, many vacant and others in need of repairs or modernization; demolition of dilapidated structures by the city has left many buildable vacant lots interspersed among the remaining houses. Relative to Green Bay, rents and especially purchase prices in South Bend are low. Local officials hope that the effective demand provided by the allowance program will reinvigorate this market, causing both owners and landlords to repair and improve their properties to meet program standards. The city has allocated revenue-sharing funds to help homeowners pay for such improvements.

PROSPECTS FOR THE SUPPLY EXPERIMENT

The Supply Experiment was planned as a long-term venture in policy research; its final report will not be written until 1981, after five years of program operations in each site. However, research findings and practical experience relevant to national housing policy and its implementation—specifically to housing allowance policy and program design—will flow steadily from the experiment throughout its term.

Thus, even in planning for the allowance programs at each experimental site, many administrative issues that would arise in a national program were analyzed and at least provisionally resolved. Similarly, designing the research program to address the policy issues listed earlier has required careful framing of questions, some of whose answers then became self-evident.

Early program data from Site I will be analyzed in 1975; they will bear on eligibility problems, patterns of participation, the ability of enrollees to find certifiable housing, and the pattern of housing deficiencies encountered by HAO evaluators. Market and community effects of the program will be informally observed throughout 1975; comparisons of systematic data from the baseline and second-wave surveys will be completed in 1976. Each year's cycle of surveys will further clarify the housing-market and community dynamics set in motion by the program.

The field and program schedules for Site II lag those for Site I by almost exactly a year. Thus, findings from Site II will similarly lag those from Site I. However, as the data accumulate, comparisons between the two sites will enrich understanding of events in each. Finally, HUD plans to combine data from the Supply Experiment with data from other elements of the Experimental Housing Allowance Program (e.g., the Demand and Administrative Agency experiments) to extend the findings of each.

Any enterprise as large and as complex as the Supply Experiment has, at any given moment, a number of problems—technical, managerial, and budgetary. Success in resolving the many problems encountered heretofore leaves Rand and HUD reasonably confident that the Supply Experiment can be brought to a fruitful conclusion, thereby contributing in an important way to the formation of national 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 substantially increase their 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 is sponsoring a Housing Assistance Demand Experiment. Briefly, this experiment entails selecting a sample of about 1,500 low-income families in each of two large metropolitan areas² for enrollment in a housing allowance program. Subsam-

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.

ples of the enrollees are receiving allowances on different terms, as suggested above, and their housing choices and budgetary decisions will be 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 Supply Experiment is designed to test the market's response to a *fullscale* allowance program. Such a program is being mounted in each of two metropolitan housing markets,³ selected for their contrasting market characteristics. In each case, housing allowances will be 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 will then be 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 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 is initially restricted to the city of South Bend, although the entire county housing market will be monitored; 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 enrolled 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.

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 prefer-

ences. 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 designed 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 ethnic 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 environments 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 will operate at least initially only in South Bend.

⁷ The population and housing characteristics of our two experimental sites are discussed further in Sec. IV.

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 consisting of (a) one person, either handicapped, displaced, or 62 years of age or over, or (b) two or more related persons of any age is eligible to participate in the allowance program, provided that current income and assets do not exceed 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) and with Equal Opportunity assistance (if needed), but 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, 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 and reevaluates the housing unit annually.

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, in order to comply with provisions of the funding authority that supports the experimental allowance program, a nominal landlord-tenant relationship between the HAO and the homeowner is created by means of a lease-leaseback agreement. This agreement does not alter the locus of title to the property and may be terminated by the homeowner at any time. While it is in effect, the homeowner receives monthly assistance checks subject to the same conditions that apply to renters and has full responsibility for the maintenance of his property and for insurance, taxes, and any outstanding mortgage obligations; the HAO has no obligations to the mortgageholder.

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 agenda⁹ of data collection and analysis that we believe will provide reliable answers to these questions for each 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 pro-

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.

gram 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 plan to follow the experimental housing allowance program primarily through periodic analyses of administrative records provided to Rand by the HAO at each site. These records, which will be purged of personal identification, will 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 will 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 will 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

While administrative records of the allowance program will provide measures of its market *stimulus*, data on market *response* will 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 will be examined annually in the field to record the physical characteristics of its residential buildings and the general characteristics of the immediate neighborhood. After baseline, the survey will emphasize alterations or improvements, changes in the physical condition or use of the property, and changes in the neighborhood.

Survey of Landlords. For each rental property in the sample, we will seek 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 will also seek data on mortgage financ-

ing. property ownership and management, property and tenant characteristics, landlord-tenant relationships, and plans for the property. After 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 will also seek annual interviews with the current occupants of up to four housing units on each property. Each household head will be asked to describe the interior features and condition of his housing unit and to report his contract rent and other housing expenses. He will also be asked to give his views on his housing and his neighborhood. As background for analysis of these housing-related responses, he will be 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 will cover similar ground but will also include detailed questions on mortgage financing and housing expenses similar to those addressed to landlords.

After the allowance program is under way, the annual interviews 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 will include 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 will be followed if they move from empaneled housing units. They will be 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 will gather 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 will be gathered at baseline and 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 will draw on existing statistical systems for regional and national background data with which local data may be compared. Specifically, we will compile 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. As we explain in Sec. II, the preliminary results of Site I baseline surveys 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).

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 long-enough period 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-

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.

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.

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 the publication of 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 first annual report on the experiment comes just as analysis begins on baseline data for Site I and before baseline surveys have been conducted in Site II. Thus, our emphasis in this section is on experimental design, and in the next two sections, on field operations. As yet, experimental findings are slim. However, Sec. IV summarizes what we have so far learned about our two sites, and Sec. V looks to the future in terms of experimental design, survey fieldwork, data management, and analysis and reporting.

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 report¹¹ 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 Sec. III.

A draft of the research design¹² 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 design¹³ 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 dated from 5 March 1973, when Rand opened its site office in Brown County. It thus overlapped the planning phase by some months. The remainder of this report deals essentially with Phase II. In the next section, we review the sequence of events in the first experimental site up to the end of September 1974. Section III provides a similar review of operations in the second site.

¹¹ 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.

¹² 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.

¹³ Robert Dubinsky (ed.), *The Housing Allowance Program for the Supply Experiment: First Draft*, The Rand Corporation, WN-8350-HUD, August 1973.

II. PROGRESS IN SITE I

Brown County, Wisconsin, was one of three metropolitan areas that survived the screening procedures for the selection of Site I. All three were visited in the fall of 1972 by a joint team of Rand and HUD personnel, and the experimentally relevant characteristics of each were carefully documented. On 1 November 1972, Rand met with representatives of HUD's Washington and regional offices to review the candidates. The review group named Brown County as the most desirable candidate for Site I, a recommendation later approved by the Secretary of HUD.

Before naming Brown County as an experimental site, it was legally and practically necessary to secure the support of local jurisdictions within which the experimental allowance program would operate. Negotiations proceeded rapidly and smoothly; memoranda of understanding with the major units of local government were quickly obtained, and HUD designated Brown County as Site I of the Supply Experiment on 22 December 1972.

The chronology of subsequent events is given in Appendix B. Table B-1 summarizes the major events leading to the implementation of the experimental housing allowance program. Table B-2 summarizes those relating to the implementation of the research plan for Brown County. The two are interrelated in that data from the screening survey conducted in September 1973 were needed to set program standards; and in that it was important to complete the baseline field surveys before beginning enrollment in the allowance program.

Both schedules were powerfully affected by the fact that some major issues and innumerable details of both program and research design and operations had to be settled along the way. Earlier, we had hoped to complete the baseline surveys in March 1974 and to begin enrollment in the allowance program the same month. Actually, the surveys were completed in April. To test its enrollment system, a few applications were processed by the HAO beginning late in March, but enrollment was not opened to the general public until mid-June.

IMPLEMENTING THE ALLOWANCE PROGRAM

From June 1973 to June 1974, implementation of the experimental allowance program in Brown County proceeded along three interrelated tracks:

- Preparing the application for an Annual Contributions Contract to fund the allowance program, together with short-term and long-term funding proposals and staffing plans; and securing various legal agreements between HUD, local governing bodies, the Brown County Housing Authority (BCHA), and the HAO, which were needed to implement the program.
- Developing the Housing Allowance Office Handbook, which governs the organization of the HAO, the administrative procedures to be used in outreach, enrollment, counseling and grievance procedures, housing evaluation, and payment of benefits; and specifying program standards

such as eligibility rules, schedules of benefits, and criteria for housing certification.

- Incorporating the HAO, securing office space and equipment for it, and recruiting and training its staff.

These things were done by Rand's Field and Program Operations Group, with increasing support from Rand's Brown County site office and the HAO, as those offices acquired staff. The first two activities entailed extended negotiations between the interested parties—Rand, HUD's Office of Policy Development and Research, the HUD regional office, and the BCHA.

The Annual Contributions Contract between HUD and the BCHA and the delegation agreement between the BCHA and the HAO were both signed on 14 March 1974. The contract provides for federal contributions for a period of ten years from that date, as needed to provide housing allowances and to administer the program; the maximum annual contribution is \$9.2 million. These funds are thereupon transferred by the BCHA to the HAO, which enrolls eligible households and disburses monthly allowances.

A complete draft of the HAO Handbook was submitted to HUD on 4 January 1974, although legal issues relating to homeowner assistance were not resolved until 6 February. After numerous revisions and modifications, the handbook was provisionally approved by HUD as the basis for program operations; however, revisions and modifications have continued as pretests and initial operating experience with the program revealed problems with various administrative standards and procedures.

The HAO was incorporated on 19 October 1973, and temporary office space was secured late in December. Although permanent funding for the HAO necessarily awaited completion of the Annual Contributions Contract, advances from HUD's Office of Policy Development and Research enabled Rand to begin recruiting senior staff. In December 1973, the HAO's Board of Trustees formally approved its articles of incorporation, adopted bylaws, and ratified the appointments of the director and deputy director of the HAO. Following the execution of the contract, core staffing was quickly completed,¹ and on 29 May the HAO received its first installment of program funds. When the HAO opened for business in mid-June, a total of 39 employees had been hired and trained in their jobs. At the end of September, there were 58 employees, and the HAO moved into permanent quarters.

Although a few applications had been invited and processed earlier to test the system, the first applications from the general public were accepted on 19 June. By 27 September, over 1,200 preliminary applications had been received, 704 applicants had been interviewed and their eligibility determined, and 454 households were enrolled in the program (see Table 1). Of those enrolled, 245 were actually receiving payments then; the remainder had not yet completed housing certification requirements or had not yet submitted a copy of their lease agreements to the HAO.

It should be noted that when applications were invited from the public, people were offered only general guidance as to their eligibility; the characteristics of applicants therefore reflect self-selection rather than control by the HAO. Although the numbers are yet small, it is interesting to note that about 55 percent of the

¹ See Appendix C, Fig. C-2.

Table 1

CUMULATIVE APPLICATION AND ENROLLMENT STATISTICS:
BROWN COUNTY HOUSING ALLOWANCE PROGRAM,
19 JUNE TO 27 SEPTEMBER 1974

Item	Number of Households	Percent
<i>Preliminary Applications Received</i>	1,212	100.0
By tenure of applicant:		
Renter	670	55.3
Homeowner	526 ^b	43.4
Unknown	16 ^b	1.3
By age of household head: ^a		
Under 62 years	752	62.1
62 years or over	460	37.9
By processing status:		
Enrollment application processed	704	58.1
Awaiting interview or in process	508	41.9
<i>Enrollment Applications Processed</i>	704	100.0
By status of applicant on 27 September:		
Eligible, enrolled	454	64.5
Payment authorized	245	34.8
Awaiting evaluation or lease	205	29.1
Dropped out	4	0.6
Eligible, declined enrollment	28	4.0
Ineligible	222	31.5

SOURCE: Administrative records of the Housing Allowance Office of Brown County as of 27 September 1974.

^aAge of head of household or spouse, whoever is older.

^bIncludes three households not residing in Brown County as of 31 March 1974.

applicants and a similar proportion of the enrollees are renters, the remaining 45 percent being homeowners. Because homeowners generally have less difficulty with housing certification, these proportions are roughly reversed among those actually receiving payment.

Given the general invitation to apply for the program, it was inevitable that many applicants would be found ineligible, usually because their incomes were too high or their assets too large; of the applicants so far processed, nearly a third were found ineligible for these reasons. We are currently seeking outreach and initial contact procedures that will reduce this figure without discouraging eligible households from applying.

Among those actually receiving payments (see Table 2), gross incomes are generally low, averaging \$4,073 for renters and \$5,113 for homeowners.² After adjustments required under Sec. 23, these averages are reduced to \$3,268 and \$3,916 respectively. Allowance entitlements for renters average \$55 per month (about \$660 annually); for homeowners, the average is about \$51 (\$610 annually).

² These figures include imputed income from homeowner equities; that is probably why homeowner incomes are so much greater than renter incomes.

Table 2

SELECTED CHARACTERISTICS OF HOUSEHOLDS ENROLLED AND RECEIVING PAYMENTS:
BROWN COUNTY HOUSING ALLOWANCE PROGRAM, 27 SEPTEMBER 1974

Tenure	Number of Households by Age of Head ^a		Average Annual Income (\$)		Average Monthly Maximum Allowance Entitlement (\$)
	Under 62 Years	62 Years or more	Gross ^b	Adjusted Gross ^c	
Renter	57	63	4,073	3,268	55.12
Homeowner	57	68	5,113	3,916	50.86
All households	114	131	4,604	3,599	52.94

SOURCE: Administrative records of the Housing Allowance Office of Brown County as of 27 September 1974.

^aAge of head of household or spouse, whoever is older.

^bIncludes transfer income and imputed income from home equity.

^cAdjustments include deductions for dependents, for work-related expenses, and for elderly household heads.

Finally, we note that about 38 percent of the applicants and 53 percent of those actually receiving payments are households headed by elderly persons (head or spouse 62 years or older).

The enrollment plan approved by HUD envisions a two-year buildup to the maximum of 6,096 households (if that many choose to participate). As Table 3 indicates, we fell behind schedule in August and September, primarily because we had underestimated the number of scheduled enrollment interviews needed to yield a successful enrollment. Steps have been taken to increase the processing rate; and because the initial pool of applications is nearing exhaustion, an active outreach program was scheduled to begin in October. (Outreach activity was virtually suspended in August and September to avoid an excessive backlog.) Although we estimate that there are 12,200 eligible households in Brown County, we have no way of knowing how many will eventually choose to participate.

IMPLEMENTING THE RESEARCH PROGRAM

Site-specific aspects of the research program relate mainly to the collection of data by means of the field surveys described in Sec. I. These activities, listed chronologically in appendix Table B-2, can be conveniently grouped as follows:

- Designing survey instruments and related training and field materials.
- Selecting the samples of residential properties to be surveyed.
- Training interviewers and conducting the surveys.
- Coding open-ended survey responses.
- Transcribing survey data from questionnaires to machine-readable records and cleansing the data of accumulated errors and ambiguities.

Table 3

PLANNED AND ACTUAL ENROLLMENT SCHEDULE:
BROWN COUNTY HOUSING ALLOWANCE PROGRAM

Client Status by Month in 1974	Number of Households				Actual as Percent of Planned	
	Planned		Actual		Per Month	Cumulative
	Per Month	Cumulative	Per Month	Cumulative		
<i>Enrollment¹</i>						
June	25	25	12	12	48.0	48.0
July	100	125	123	135	123.0	108.0
August	250	375	155	290	62.0	77.3
September	300	675	164	454	54.7	67.3
October	370	1,045	--	--	--	--
November	370	1,415	--	--	--	--
December	370	1,785	--	--	--	--
<i>Receiving Payments</i>						
June	0	0	4	4	--	--
July	25	25	56	60	224.0	240.0
August	100	125	77	137	77.0	109.6
September	250	375	101	238	40.4	63.5
October	300	675	--	--	--	--
November	370	1,045	--	--	--	--
December	370	1,415	--	--	--	--

SOURCE: Administrative records of the Housing Allowance Office of Brown County as of 27 September 1974.

NOTE: Applications for enrollment were accepted beginning 19 June 1974. Actual figures shown here cumulate through 27 September 1974.

Does not include households that have been interviewed but whose applications are still in process.

- Compiling master files of individual questionnaire records for each survey and checking these files against the sample list sent to the field.
- Auditing the data in each file for completeness, internal coherence, reliability, and sample validity.
- Analyzing the data pursuant to research objectives.

The fieldwork for the Site I screening and baseline surveys was subcontracted by Rand to the Urban Opinion Surveys division of Mathematica, Inc. The subcontractor also assisted with instrument design, prepared training manuals, and designed field materials. The remaining tasks were performed by Rand personnel assigned to the Supply Experiment. Four functional groups were involved in planning and executing most of these activities: Design and Analysis, Surveys, Survey Data Preparation, and Data Systems.³

The development of survey instruments for five major surveys and four minor surveys, including variations on the basic instruments to accommodate their administration to special groups, began in the summer of 1972. Particularly with respect to the surveys of landlords, tenants, and homeowners, the task was formidable. Final versions of these instruments each have 1,200 to 1,500 response fields, perhaps half of which apply to any one respondent; on the average, they require

³ See Appendix C for an overview of the organization of the Housing Assistance Supply Experiment (HASE).

about 90 minutes to administer. The other surveys were technically less difficult to design, but all required numerous drafts and revisions to meet both the data needs of the HASE research design and the requirements for comparability of certain classes of data with those collected in other experimental programs under the umbrella of HUD's Experimental Housing Allowance Program.

A second formidable task was sample selection. As explained in Sec. I, the main survey agenda was addressed to probability samples of residential properties in each of eighteen strata. Beginning with a tax-office list of all tax parcels within Brown County, it was necessary first to identify those in residential use; then to classify each residential property according to stratum definitions; and finally, to sample each stratum adequately to ensure that, allowing for nonresponse and other field problems, we could meet design targets for numbers of complete property records within each stratum.⁴

To facilitate sample selection, as well as to provide early data on the Brown County housing market (needed for planning the allowance program), a screening survey of the occupants of about 10,500 housing units located on 6,265 properties was conducted in September 1973. Survey questionnaires and related forms were keypunched, cleaned, and assembled into a master file from which the baseline sample was later selected.

In the course of fielding and processing this survey, we discovered problems in our initial classification of properties and also in matching survey records against the screening sample list. Resolution of these problems delayed completion of the baseline sample list to 18 December 1973, about six weeks beyond the target date. Although various stratagems were devised to minimize the effect of this delay on baseline fieldwork for the landlord, tenant, and homeowner surveys, these surveys did not enter the field until 10 December, about a month behind schedule.

The smaller and less complex surveys (survey of residential buildings, survey of neighborhoods, survey of seasonal properties, survey of nonresidential properties) were conducted in offpeak periods between the screening survey and the baseline surveys of landlords, tenants, and homeowners or during the cleanup period of the latter surveys. When the full baseline agenda was completed at the end of April 1974, Rand had received completed observation forms for 8,064 street segments in 108 neighborhoods and for 6,750 residential buildings;⁵ completed interview questionnaires for 2,111 residential landlords, 3,044 tenants, 897 homeowners, and owners of 322 seasonal or nonresidential properties; and several thousand related documents such as refusal forms, vacancy reports, interview validation reports, and quality-control problem reports.

The survey data were delivered to Rand by its fieldwork subcontractor in hard-copy form. Most survey responses were precoded in the instrument; but responses to some open-ended questions (e.g., occupation and industry of employment) and accounting classifications for income and expense items were coded by Rand's Sur-

⁴ A complete property record consists of a completed observation form for each residential building on the property; a completed landlord or homeowner interview, as appropriate; and at least one completed tenant interview (or a vacancy report) for each rental property. Design targets call for empaneling approximately 2,000 residential properties with complete baseline records.

⁵ Because of the sample-selection problems mentioned above, the survey of residential buildings was begun on properties included on the screening sample list rather than on the smaller set of properties on the baseline sample list. Of the 6,750 completed observation forms, 4,662 pertain to properties on the baseline list.

vey Data Preparation Group. Except for some attitudinal response fields in the tenant and homeowner instruments, this coding was completed in July 1974.

In the meantime, the prekeypunch edit of some 21,000 interview questionnaires and observation forms had been completed, and all were keypunched directly onto magnetic tape by the end of the summer. Once in machine-readable form, individual records were thoroughly checked for errors in skip patterns, unauthorized or implausible codes, and internal contradictions in responses; and the errors were corrected insofar as possible by review of the hardcopy source and consultation with the subcontractor.

At the end of September, clean master files had been compiled for the survey of residential buildings and the survey of landlords; work continued on the survey of neighborhoods and the survey of tenants and homeowners. By prior agreement with HUD, the surveys of seasonal and nonresidential properties were set aside and not processed.⁶

In the meantime, an audit of the screening survey master file was completed, and audit specifications for the other surveys were prepared and programmed, to be applied as soon as cleaned master files were available. Even without these files, it was possible to account for the baseline sample list in terms of the final record status for each scheduled interview. Discrepancies revealed by these accounts led us to undertake a small number of interviews and property observations in the summer of 1974.

Tables 4, 5, and 6 summarize the outcomes of the baseline surveys of landlords, tenants, and homeowners.⁷

Out of 3,009 rental properties listed for landlord interviews (Table 4), completed interviews were returned for 2,111 or 70 percent of the total. The remainder include refusals, contact failures, cases in which the interviewer discovered that the status of the property made a landlord interview inappropriate, and a few administrative errors.

These results are distinctly encouraging. During the planning for the Supply Experiment, both our staff and others were concerned about the dependence of the analysis plans on responses from landlords to a lengthy survey instrument, especially one seeking details of property financing, rental revenues, and operating expenses. Our sampling plan was based on an expected sample-completion rate of 55 percent, whereas we actually obtained completed interviews for 70 percent of the sample list, for 72 percent of those with whom interviews were actually attempted, and for 79 percent of the landlords actually contacted.

It remains to be seen whether the landlords in the permanent panel will respond as well to annual reinterviews and also whether landlords in Site II will respond as well as those in Site I. (We are also as yet unable to appraise the quality of the data obtained in the baseline landlord survey, although we do know that failures to respond to questions about income and expenses were surprisingly rare.)

The appropriate measure of success for the tenant survey is more complicated (Table 5). Although 6,706 rental housing units were included on the baseline sample list, a tenant on a given property was generally scheduled for an interview only if

⁶ See Sec. V, "Recent Design Changes."

⁷ Here, we deal only with the outcomes of interview attempts, not the contents of the records. Preliminary tabulations of responses to selected survey questions are discussed in Sec. IV.

Table 4
FINAL STATUS OF LANDLORD SURVEY RECORDS: BASELINE, SITE I

Stratum Number	Prebaseline Stratum Assignment ¹	Interview Attempts by Final Status				Not Attempted, Terminated, or Status Unknown		Total Sample	Summary Statistics			
		Field Complete	Refusal	No Contact	Total	Not Attempted or Terminated	RMS Error		Total	Sample Completion Rate ²	Field Completion Rate ³	Field Response Rate ⁴
	<i>Urban Rental</i>	1,770	445	209	2,424	28	30	58	2,482	.71	.73	.80
	Single-family units	793	225	110	1,128	18	14	32	1,160	.68	.70	.78
1	Lower tercile ⁵	317	107	58	482	15	12	27	509	.62	.66	.75
4	Middle tercile	302	79	29	410	1	2	3	413	.73	.74	.79
7	Upper tercile	174	39	23	236	2	--	2	238	.73	.74	.82
	2-4 units	788	181	83	1,052	7	14	21	1,073	.73	.75	.81
2	Lower tercile ⁵	383	85	40	508	4	6	10	518	.74	.75	.82
5	Middle tercile	296	68	33	397	3	8	11	408	.73	.75	.81
8	Upper tercile	109	28	10	147	--	--	--	147	.74	.74	.80
	5+ units	189	39	16	244	3	2	5	249	.76	.77	.83
3	Lower tercile ⁵	41	10	7	58	3	--	3	61	.67	.71	.80
6	Middle tercile	90	21	6	117	--	1	1	118	.76	.77	.81
9	Upper tercile	58	8	3	69	--	1	1	70	.83	.84	.88
	<i>Rural Rental</i>	300	99	37	436	15	2	17	453	.66	.69	.75
10	Lower and middle terciles ⁵	271	89	33	393	14	2	16	409	.66	.69	.75
11	Upper tercile	29	10	4	43	1	--	1	44	.66	.67	.74
	<i>Specialized Housing</i>	32	14	9	55	5	--	5	60	.53	.58	.70
17	Rooming house	19	8	4	31	2	--	2	33	.58	.61	.70
18	Mobile home ⁶	13	6	5	24	3	--	3	27	.48	.54	.68
12-16	<i>Other⁷</i>	9	2	--	11	1	2	3	14	.64	.82	.82
	Total	2,111	560	255	2,926	49	34	83	3,009	.70	.72	.79

SOURCE: Tabulations of cleaned RMS Master File.

¹Rental properties are stratified by location (urban or rural), by number of housing units (urban properties only), and by average gross rent per housing unit on property (lower, middle, or upper tercile of the overall rent distribution for Brown County). Special strata, undifferentiated with respect to location, number of housing units, or rent, are provided for rooming houses and mobile home parks.

²Field completions/total sample.

³Field completions/total interview attempts.

⁴Field completions/total contacts.

⁵Includes properties not stratified by average gross rent.

⁶Includes only properties with mobile homes constituting at least 75 percent of housing units.

⁷Prebaseline strata 12-16, reclassified as rental properties during baseline fieldwork. Landlord interviews were scheduled in the field.

his landlord had been interviewed.⁸ In addition, some rental units were vacant at the time of the interview attempt, and others were discovered to be owner occupied (e.g., by resident landlords). Altogether, we attempted interviews with 3,977 tenants and succeeded in 3,044 cases or 77 percent of the total; our planning was based on an estimated field-completion rate of 85 percent.

Table 5 shows that over half of the incomplete attempts were contact failures, a growing problem in survey research. (Increasingly, husbands and wives are both employed, which reduces the likelihood of finding a respondent at home.) In this survey, at least four attempts were made at different hours and on different days before a record was retired as a contact failure; however, since we sought a joint interview with male and female household heads (if appropriate), contact difficulties were increased by the need to find both at home. We are currently studying ways to reduce the incidence of contact failure, especially for members of the permanent panel.

Table 6 reports on our attempts to interview homeowners. The results here are very like those for landlords, except that the sample-completion rate is lower because some single-family homes on the sample list were vacant at the time of the interview. Here too, our performance was substantially better than anticipated: Out of 1,240 interviews attempted, 897 or 72 percent were completed. Eighty percent of those actually contacted completed the interview. On the advice of our fieldwork subcontractor, our planning was based on a field-completion rate of only 50 percent.

The survey of residential buildings, addressed to the same sample of properties as the landlord, tenant, and homeowner surveys, consisted of direct observations by the fieldworkers that could usually be completed without contacting either the owner or the occupants of a property.⁹ Except for a few cases in which an adequate view of the property could not be obtained, observation forms were completed for all properties on the baseline list.

The survey of neighborhoods consists of two parts. One is a form for recording general data about the neighborhood from public records, land-use maps, and similar sources. The other consists of a "windshield" survey of some 8,064 street segments, for each of which the fieldworkers recorded general land-use characteristics, presence and condition of public facilities, and types and condition of residential properties. Here again, except for occasional administrative or field errors, the files are complete.

Overall, the screening and baseline surveys in Site I appear to have been quite successful, and we have resolved nearly all of the apparent discrepancies between the sample lists and the records actually returned from the field. Our audit of the screening survey revealed some minor problems with the sampling frame that affect the weights assigned to individual records but no serious problems with item nonresponse. We cannot yet tell the quality of responses to the baseline surveys.

Audit and analysis of the baseline survey files is now under way. We plan to publish our findings at intervals during the first half of 1975 in a series of working

⁸ Because we plan to empanel only properties for which a complete baseline record exists, obtaining tenant interviews in combination with a landlord refusal or contact failure would not have been generally useful. However, a selected subsample of tenants was interviewed independently of the outcome of the landlord interview so that we could appraise sampling bias in the panel of properties with complete baseline records.

⁹ In fact, fieldworkers were instructed to avoid such contact in order to minimize the burden of the surveys on respondents.

notes. The earliest analyses will reflect data contained in each survey file separately; later, records of different surveys pertaining to a single property (or neighborhood) will be linked for joint analysis.

Meanwhile, we are selecting the permanent panel of residential properties from those with complete baseline survey records and are planning the second wave of surveys. The latter task includes adapting baseline survey instruments to a reinterview mode for some respondents and an initial interview mode for others (e.g., new owners or tenants of properties in our sample). For the second wave, we are subcontracting fieldwork to the National Opinion Research Center.

The problems encountered during sample selection and fieldwork and in processing the survey records of this complex agenda of survey research have led us to create a more powerful computerized record management system (RMS) that we believe will simplify both the administration of the surveys and subsequent accounting procedures. When the permanent panel is selected, information about each property and its owners and occupants will be entered into the RMS, which will then produce the field materials required by the subcontractor; later, it will track progress on each property in the panel and produce status reports at weekly intervals during the field period.

We plan the second-wave fieldwork in Site I for January through May of 1975, beginning with the surveys of tenants and homeowners and shifting to the survey of landlords in April (by which time respondents should have assembled their financial records for the preceding year in order to prepare their income tax returns). The second-wave survey of residential buildings is planned for March and April at a time when, we hope, field observation will be relatively unhampered by weather conditions and snow cover. We plan to repeat this schedule in subsequent waves.

We also expect that the experience gained in processing the baseline survey records, combined with the smaller number of records that will be produced annually for the permanent panel, will substantially shorten the lag between the completion of fieldwork and the availability of cleaned master files for audit and analysis.

III. PROGRESS IN SITE II

As noted in the preceding section, negotiations with local jurisdictions in Brown County, the preferred candidate for Site I, moved quickly to a successful conclusion. Securing a second site proved more difficult. Here, we were seeking a metropolitan housing market typical of the class of those with unstable or declining urban centers containing substantial populations of disadvantaged minorities but with a total population of under 250,000.

Screening procedures completed during the summer of 1972 led to agreement between Rand and HUD on three candidate metropolitan areas for Site II. All three were visited by a joint team of Rand and HUD personnel, and the experimentally relevant characteristics of each were carefully documented. On 1 November 1972, Rand met with representatives of HUD's Washington and regional offices to review the candidates. The consensus recommendation of the review group named Saginaw County, Michigan, as the most desirable candidate, and negotiations with local officials there began shortly thereafter.

The city of Saginaw and some outlying townships were willing to join the program, but a number of suburban jurisdictions declined to participate. Although the population of those jurisdictions approving the experimental allowance program amounted to about 60 percent of the county total, the nonparticipating jurisdictions formed a geographical pattern that we thought would cause serious problems for the experimental design.

After a year of fruitless negotiation in Saginaw County, the search for a second site was reopened in the fall of 1973. Two additional candidate sites were visited: Clark County, Ohio (Springfield SMSA), and St. Joseph County, Indiana. Negotiations with local jurisdictions in these two counties revealed a pattern of response similar to that encountered in Saginaw County: Officials of the central cities in each case welcomed the program; those of most suburban jurisdictions were wary.

In February 1974, Rand and HUD jointly reviewed the status of negotiations with local jurisdictions in Saginaw, Clark, and St. Joseph counties. In none of the three had we been able to obtain enough local approvals to create an effective countywide jurisdiction for the experimental housing allowance program. Weighing both present circumstances and future prospects, a consensus in favor of St. Joseph County was reached.

In St. Joseph County, approvals were needed from three units of local government in order to mount a countywide allowance program: the city of South Bend, the adjoining but much smaller city of Mishawaka, and the county itself.¹ Although the city of South Bend, with about half the county's population, was the only one of the three ready to participate in the program, other features of the community made it particularly attractive in terms of both the housing allowance and research programs; and we judged that the other units of government might join the allowance program at some future date.

¹ Under Indiana law, approval is not required from individual rural townships, as was the case in Brown County (Site I) and also in Saginaw and Clark counties (Site II candidates).

On 8 April 1974, HUD designated St. Joseph County as Site II for the Supply Experiment, with the city of South Bend as the jurisdiction within which the allowance program would operate. In anticipation of a possible future extension of the allowance program to the remainder of the county, and because data were in any case desirable for the entire metropolitan housing market, Rand and HUD agreed that the research program would embrace the whole county.

IMPLEMENTING THE ALLOWANCE PROGRAM

By the time Site II was selected, most of the groundwork for the Supply Experiment's housing allowance program had been laid. In preparing for operations in Site I, Rand and HUD had resolved a long series of problems relating to appropriate contractual relationships between the various parties involved in the program, administrative procedures of the HAO, budget and staffing norms, and program standards. Since we wanted the allowance program in Site II to be as nearly like the program in Site I as differences in local circumstances would permit, our solutions to Site I problems were generally transferable to Site II.

For these reasons, we were able to move quite rapidly in implementing the experimental housing allowance program in South Bend (see appendix Table B-3). An existing agency, the South Bend Housing Authority (SBHA), was designated to act for the community in matters relating to the program, and it submitted a formal application to HUD for an Annual Contributions Contract on 14 August. In the meantime, the HAO was incorporated (25 July), and on 5 September its director and deputy director were formally appointed. The following day, HUD and the SBHA executed the contract, and the SBHA and HAO executed the delegation agreement.

The contract provides for federal contributions to the SBHA for a period of ten years from the date of its execution, as needed to provide housing allowances and to administer the program; the maximum annual contribution is \$17.5 million. These funds are thereupon transferred by the SBHA to the HAO, which enrolls eligible households and disburses monthly allowances.

If the allowance program is permanently confined to South Bend, it is extremely unlikely that the full amount will ever be used. That amount was obligated in the expectation that the remaining jurisdictions in St. Joseph County would later join, which would roughly double the pool of eligible households. A maximum of 9,638 households may be assisted at any one time under this contract.

With the ACC signed and its first installment paid on 3 October, the main task remaining before the HAO can begin enrollment is to recruit and train its staff. Including the director and deputy director, six senior positions have so far been filled,² and recruiting for the remaining positions is proceeding rapidly. Our goal is to be ready for limited enrollment beginning in December 1974 and to open enrollment to the general public beginning in March 1975.³

² See Appendix C, Fig. C-3.

³ The enrollment schedule must also mesh with the research schedule. While it would be desirable from an experimental perspective to complete the baseline survey agenda prior to the commencement of enrollment, we have agreed with HUD to invite enrollment while the surveys are still in the field, but only by selected homeowners known not to be in the baseline sample. See the discussion of the research program, below.

As in the case of Site I, we plan a two-year buildup to full enrollment. However, planning for Site II enrollment is complicated by the possible extension of the allowance program to Mishawaka and the remainder of St. Joseph County. When and if this occurs, both the enrollment schedule and HAO staffing levels must be reconsidered.

Until screening survey data are analyzed and site-specific program standards are approved by HUD, we have only crude estimates of the pool of eligible households in either South Bend or the entire county. We currently judge the number of eligible households in South Bend to be in the vicinity of 10,500; Mishawaka probably contains about 3,300, nearly all homeowners; the remainder of the county may have as many as 4,400. The total of 18,200 is clearly larger than the ACC maximum of 9,638, but we expect only a fraction of all eligibles to apply.

Above, we discussed the institutional and financial arrangements for the allowance program in South Bend; the remaining topic is program development. As suggested in the beginning of this section, it promises to be less difficult than it was in Site I. During the past two months, Rand and HAO staff have reviewed the program handbook prepared for the Brown County HAO and have adapted its provisions to circumstances in South Bend. A draft covering everything except certain site-specific program standards that have yet to be developed was delivered to HUD on 15 October. The missing program standards await an analysis of housing costs in St. Joseph County based on screening survey data that became available on 30 September.

Once past the problems of site selection and of the definition of allowance-program jurisdiction, program development for South Bend has been smooth and rapid, and we have found local officials and citizens' groups cordial and helpful. We should note, however, that Site II is much more complex, both politically and socially, than Site I; at some point, the allowance program may well encounter opposition from one or another competing interest group and become a local political issue. Our challenge is to surmount such difficulties by tact, flexibility, and good sense.

IMPLEMENTING THE RESEARCH PROGRAM

As explained earlier, St. Joseph County was selected as the second experimental site only after more than a year of fruitless negotiations with local jurisdictions in Saginaw County. When the list of alternative candidates for Site II was reopened in the fall of 1973, HUD and Rand agreed to do limited fieldwork in three candidate sites in order to shorten the elapsed time to the baseline surveys and subsequent program enrollment once a site was selected.

Thus, between December 1973 and February 1974 a Rand sample-selection team visited Saginaw, Clark, and St. Joseph counties to gather information needed to design a sample-selection procedure for each. In each case, the contents and organization of real property tax records for all taxing jurisdictions within the county were studied, and arrangements were made for the acquisition of whatever machine-readable files and directories were available.

The team then designed sample-selection procedures for all three sites and began processing the available records. As soon as St. Joseph County was selected, work on the other sites was abandoned, and a full field and data-processing schedule for South Bend was established.

The research agenda for St. Joseph County is in most respects identical to that for Brown County, entailing the same sequence of preliminary sample selection, screening survey, baseline sample selection, baseline surveys, and finally, empanelment of some 2,000 residential properties. However, procedures differ, both because of differences in local records and because our experiences in Site I suggested ways to avoid difficulties encountered there.

As it turns out, the final schedule in Site II lags that for Site I by almost exactly twelve months (see appendix Table B-4, and compare it to Table B-2). In the case of Site II, Rand undertook the tax-record search that in Site I had been delegated to the subcontractor but retained Westat, Inc., for subsequent survey fieldwork. Westat opened its South Bend site office in May 1974 and began recruiting interviewers and junior office staff. During June, while Westat was fieldlisting addresses on large rental properties, Rand was preparing sample lists for other strata of residential properties. The first installment of field materials for the screening survey was delivered to Westat on 24 June, and Westat entered the field on 10 July.

By 6 September, Westat had attempted to interview the occupants of some 10,250 housing units and had delivered most of the completed questionnaires, refusal forms, contact-failure reports, and vacancy reports to Rand. These were edited, keypunched, and cleaned in batches as they arrived. By monitoring interview completions by stratum and releasing supplemental samples for only those strata in which completions were falling short of targets, Rand was able to achieve a better overall allocation of survey effort than had been accomplished in Site I.

In the beginning of October, roughly three weeks after the completion of fieldwork and cleanup operations, the Supply Experiment's Survey Data Preparation Group completed screening survey processing and delivered a clean master file to the sample-selection team for restratification, weighting, and baseline sample selection. Simultaneously, the Design and Analysis Group began tabulations of housing costs, housing characteristics, and household characteristics, which were needed to decide on a schedule of standard costs of adequate housing for South Bend and to estimate the number and characteristics of households eligible to participate in the allowance program.

A baseline sample list of residential properties and the housing units on each is scheduled for completion by the end of October. It will be entered into Rand's new record management system, which will add names and addresses of property owners; produce field materials for the baseline surveys of residential buildings, landlords, tenants, and homeowners; and track the progress of each survey in the field. Delivery of the first baseline field materials to Westat is scheduled for mid-November.

Another critical path leading to the baseline surveys in Site II has been the technical revision of survey instruments. Field experience reported by the Site I survey subcontractor, analysis of error reports generated in the course of data-cleaning operations, and analysis of response patterns ("marginals") on cleaned questionnaires all suggested numerous small improvements in instrument format and question wording. A major change, intended to reduce questionnaire production costs and to simplify interviewing and data reduction, was to construct landlord, tenant, and homeowner instruments as physically separable modules, with appropriate modules administered only to relevant classes of respondents.⁴

⁴ In the baseline instruments for Site I, this problem was handled either by skip patterns within each questionnaire or, in some cases, by producing complete variant instruments for special classes of respondents.

By 15 October, all baseline survey instruments for Site II had been prepared by the Survey Group and reviewed by Westat, by HUD, and by OMB. Only one serious problem was encountered: Because of the proximity in time of the baseline surveys and the beginning of the allowance program in South Bend, and because of the greater publicity that site-selection negotiations had received there, we judged it important to include in the landlord, tenant, and homeowner instruments a series of questions that elicited data on a respondent's knowledge of the program and his attitudes toward it. In order to understand the sources of these attitudes, we also included a series of questions on the general political views of the respondent. Most of these items were eliminated in the course of the HUD and OMB reviews.⁵

Currently, we expect Westat to field the baseline surveys of landlords, tenants, and homeowners beginning about 25 November 1974 and finishing in mid-March 1975. In the meantime, Westat has begun the baseline neighborhood survey, in this case entailing observers' reports on the characteristics and condition of each of some 13,000 street segments in the 86 neighborhoods HASE defined in St. Joseph County. The survey of residential buildings is currently scheduled to begin in March 1975, as the major interview surveys wind down.

Our audit of the screening survey has already begun and should be expedited by a better-developed record management system than was available in Site I and by the experience acquired from the corresponding Site I audit. Perhaps the most important feature of the audit is sample validation, an independent check on our sample-selection procedures. In it, we attempt to reconcile the numbers of housing units and households that are estimated from sample data with estimates from the 1970 census and other sources, and we also analyze distributions of selected variables for evidence of sampling, contact, or response bias. The audit will not be completed before the baseline sample is selected, but results should become available while the baseline surveys are still in the field, so that midcourse corrections can be made if needed.

We remind the reader that although the allowance program is so far limited to the city of South Bend, the surveys embrace the whole of St. Joseph County. Thus, if the program is later extended geographically, we will have appropriate baseline data; and if not, we will be able to measure any effects that spill across program boundaries to the remainder of the metropolitan housing market.

⁵ Our attempts to resolve this issue were unfortunately constrained by a very tight production schedule for the instruments. The implications of the outcome for Rand's ability to fulfill a portion of its research charter are discussed in Sec. V ("Community Attitudes").

IV. PRELIMINARY FINDINGS

Although Rand began work on the Supply Experiment in April 1972, we have yet to produce much in the way of "hard" research findings. The Supply Experiment was planned as a long-term venture requiring careful preparation and the collection of immense quantities of primary data. The first eighteen months of the research effort were devoted almost entirely to general design work: articulating analysis plans that would fulfill the research objectives, designing a data-collection plan that would support the analysis, and developing sampling procedures and survey instruments that would serve data needs. Also during this period we developed specifications for the experimental housing allowance program, in continuous consultation with HUD and with frequent revisions to accommodate shifts in prospective funding sources and apparent legislative constraints.

Beginning in the fall of 1973, our efforts shifted to the logistical and procedural problems of mounting first the baseline surveys and second the housing allowance program in Site I. As this report is written, it is possible to say that both were successful. Interview data were collected from at least as many respondents as we expected, and the Brown County HAO is a going concern, now enrolling eligible households and making allowance payments to them.

However, except for the screening survey in Site I, analysis of primary data either from the surveys or from the allowance program is just beginning. In Site II, although the screening survey has been completed, its records have yet to be analyzed; and the HAO there has yet to begin enrollment, so no program data exist.

We of course have general data on both sites, principally from the 1970 Census of Population and Housing, and some specialized data from local statistical systems. We also have by now a considerable fund of experience in the two sites that helps us interpret the available statistics. Finally, for Brown County only, preliminary tabulations of unweighted baseline survey records provide us with inexact but interesting insights into characteristics of landlords, tenants, and homeowners which are not reported by the census.

Thus, while we are obviously not yet able to report the effects of the housing allowance program on housing markets in either site, we can usefully report on the sites themselves. In this section we first describe each site in turn—its economic base and selected population and housing characteristics—relying primarily on data from the 1970 census; then we discuss trends in its housing market, relying on less-solid evidence. Next we compare the two sites, emphasizing similarities and differences that are particularly pertinent to the Supply Experiment. Finally, we summarize our very preliminary findings about the characteristics and attitudes of landlords, tenants, and homeowners in Site I.

THE REGIONAL SETTING OF THE SUPPLY EXPERIMENT

The two experimental sites were selected specifically for differences that we thought might affect the results of a housing allowance program. Candidates were first screened on the basis of 1970 census data; for the most promising, additional

data were collected from a variety of other sources. In the end, joint teams of Rand and HUD personnel visited eight sites to obtain additional information and to consult with local officials about their interest in the proposed program.¹

Although the search for suitable sites encompassed the continental U.S., we ended by choosing two midwestern locations, primarily because the Midwest has an unusually large selection of metropolitan areas with populations of under 250,000, the upper limit on size that was imposed for budgetary reasons (see Fig. 1). However, it is fair to say that having chosen one midwestern site, there were good reasons to seek a second in the same region. For one thing, similarities of climate and topography between the two sites are reflected in similarities of housing design, construction costs, and (perhaps most important) maintenance and utility costs; we judged that this fact would considerably simplify comparison of housing-market responses to the allowance program. For another, both our own administration of activities in these sites and our dealings with HUD concerning them are greatly simplified by their proximity to each other and by the fact that the Chicago Regional Office of HUD is administratively responsible for the allowance programs in both sites.

Though both sites are relatively small, midwestern metropolitan areas, the differences between their housing markets are profound. Below, we discuss each in turn; then we summarize their contrasts.

POPULATION AND HOUSING CHARACTERISTICS OF BROWN COUNTY

Figure 2 is a map of Brown County showing its political subdivisions. The county is essentially flat farmlands and woodlands and is bisected diagonally by the Fox River and its estuary, Green Bay (an arm of Lake Michigan). There were French and British fur-trading posts at the mouth of the Fox early in the 18th century; the site is now occupied by the city of Green Bay, an important lake port and transshipment point for bulk goods moving through southern and eastern Wisconsin. Urban employment in Brown County is concentrated in the manufacture of paper, paper-mill machinery, lumber and wood products, office equipment, automobile parts, cheese and other dairy products, and in wholesale distribution. Rural employment is mostly in diversified farming and dairies. The lakeshore is a popular vacation retreat, with numerous small resorts and summer cottages.

Demographic Characteristics

Shaded areas on the map mark the jurisdictions in Brown County that were populated at urban densities in 1970. These include the city of Green Bay, with a population of 87,780, and four adjoining suburbs: De Pere city (13,403), Howard village (4,911), Allouez town (13,753), and part of Ashwaubenon town (9,332 in the urban part). The remainder of the county contained 29,065 inhabitants in 1970, of which 18,920 were classified as rural nonfarm residents by the Census Bureau; they

¹ For a full account of selection procedures and the information on which decisions were based, see HASE Staff, *Site Selection for the Housing Assistance Supply Experiment: Site I*, The Rand Corporation, WN-7833-HUD, May 1972; and Robert Dubinsky, *Collected Site Selection Documents: Housing Assistance Supply Experiment*, The Rand Corporation, WN-8034-HUD, January 1973.

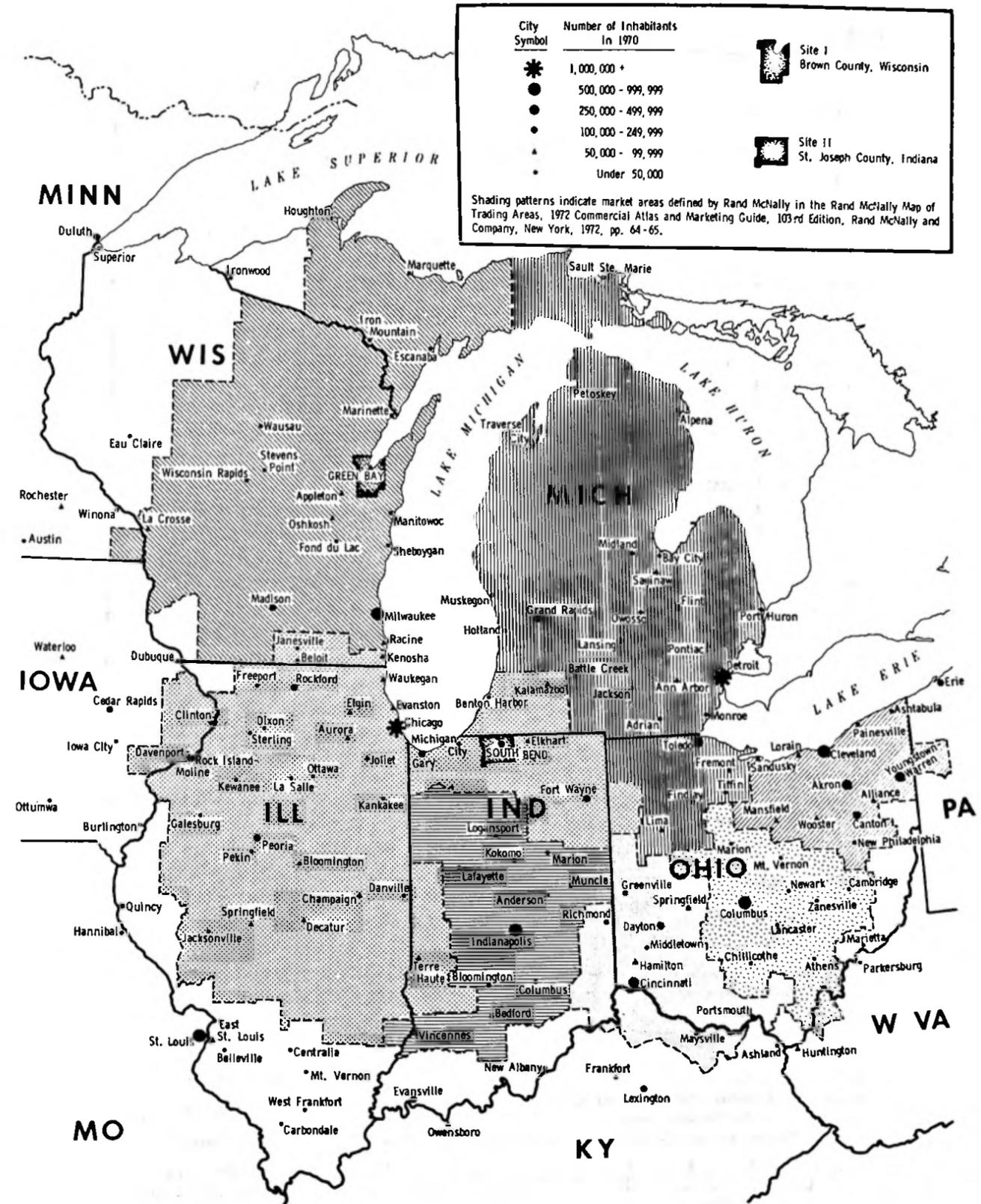


Fig. 1 — Supply Experiment sites in their regional setting

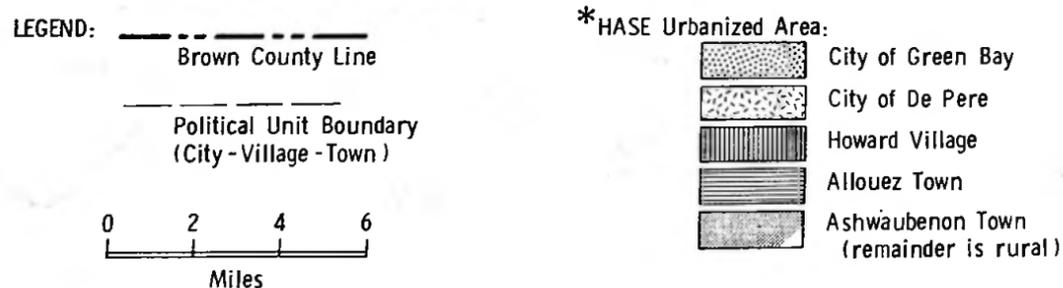
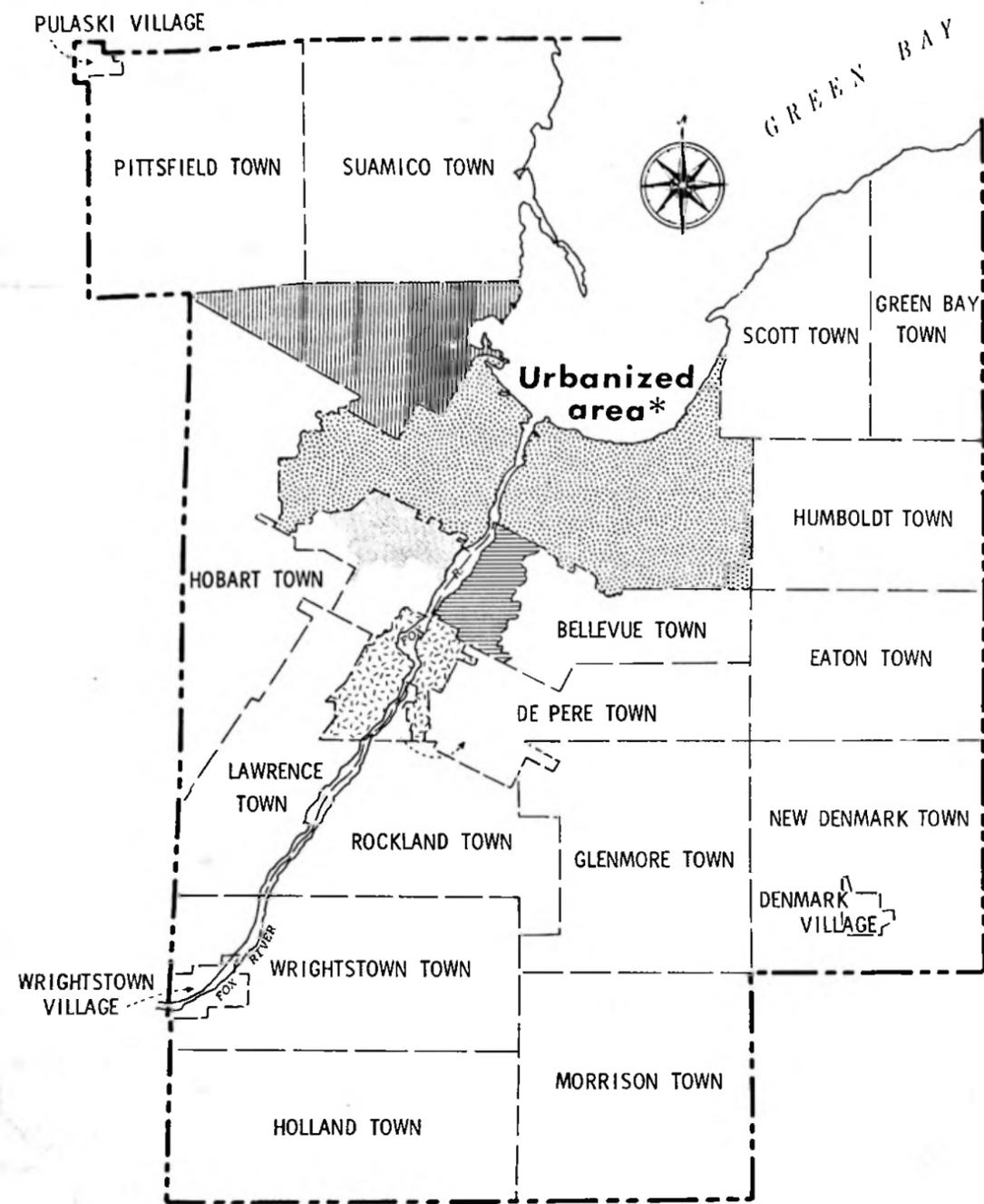


Fig. 2 — Political subdivisions of Brown County, Wisconsin, and HASE urbanized area

lived in open country or small villages, the largest being Pulaski (1,717), Denmark (1,364), and Wrightstown (1,020). The remaining 10,145 persons lived on farms.

The total population of Brown County in 1970 was about 158,000 persons (43,560 households). Its central city, Green Bay, then contained about 55 percent of this total and the urbanized area shown in Fig. 2 contained 82 percent. The remainder of the county is mostly farmland, the holdings of which still reflect its original division into 640-acre homesteads.

Table 7 presents a statistical profile of Brown County based on data from the 1970 Census of Population and Housing. Here, the data are reported separately for Green Bay ("inside central city") and for the remainder of the county ("outside central city"). It is important to note that the second category includes the urban suburbs of Green Bay (41,400 inhabitants), as well as the village and rural population of the remainder of the county (29,065 inhabitants). This classification unfortunately blurs some important differences between urban and rural Brown County.

The first of these is the pattern of population growth. The county's population has grown rapidly in recent years (26 percent between 1960 and 1970), but three-fourths of the growth has occurred within the city of Green Bay, mostly by annexation of territory from adjoining townships.² Most of the remaining growth was in adjacent suburban areas; as the migration data in Table 7 suggest, the rural farmlands have been sending population to the urban center of the county.

A remarkable feature of Brown County (and one of the reasons we chose it as an experimental site) is its ethnic homogeneity. Over 98 percent of its population is white, and nearly two-thirds are of northern European or Scandinavian ancestry, Germany being the nation of origin they most frequently identify. The remaining 2 percent includes some 1,700 American Indians, many of whom live on a reservation in Hobart township; and about 370 blacks and 640 Chicanos who live both in Green Bay and its suburbs but nowhere form a large ethnic enclave.³

Employment and Income Characteristics

As its recent growth suggests, Brown County is a generally prosperous community. Its industries are cyclically stable, and in 1970 the unemployment rate among males was only 3.1 percent. The median family income of \$10,300 compared favorably with the national median of \$9,600. Only 6.1 percent of all families had incomes below the census's poverty level (which varies with household size and for urban or rural residence), and only 2.3 percent reported receiving public assistance.⁴ Unrelated individuals were less well off; 34 percent reported incomes below the census's poverty level.

The income-geography of Brown County has a characteristic doughnut pattern: Median family income is about 14 percent higher in Green Bay's suburbs than in the city itself. Table 7 does not show data for the remaining village and rural

² Between 1960 and 1970, the population within Green Bay's 1960 boundaries increased by about 5,500, or 8 percent. Territory annexed by Green Bay between the two census dates contained about 19,400 inhabitants in 1970. Since 1970, most of the growth has occurred in suburban areas rather than in Green Bay.

³ The Chicanos are members of households at least one of whose heads reported Spanish as his mother tongue.

⁴ This figure may not be reliable; studies in other metropolitan areas have shown that receipt of public assistance was badly underreported in the 1970 census.

Table 7
STATISTICAL PROFILE OF BROWN COUNTY, WISCONSIN, IN 1970

Area	DEMOGRAPHIC CHARACTERISTICS						Net Migration 1960-1970		
	Total Population		Ethnic Minority		Percent Population Change Since 1960		Natural Increase 1960-1970		
	Number	Percent	Black	Chicano	Number	Percent	Number	Percent	
Inside central city	87,780	0.1	391	0.4	39.2	11,194	17.8	13,727	21.8
Outside central city	70,464	0.4	258	0.4	13.2	11,886	19.1	-3,645	-5.9
Total, county	158,244	0.2	641	0.4	26.4	23,080	18.5	10,082	8.1

EMPLOYMENT AND INCOME CHARACTERISTICS

Area	Unemployment Rate (%)		Annual Income (\$)				Percent Receiving Public Assistance		% with Income Below Poverty Level		% Workers Using Public Transportation
	Male	Female	Family	Unrelated Individuals		Fami-lies	Unrelated Individ-uals	Fami-lies	Unrelated Individ-uals		
	Mean	Median	Mean	Median							
Inside central city	3.6	5.5	10,690	9,975	3,900	3,026	2.5	3.1	5.5	32.1	4.5
Outside central city	2.5	5.3	12,101	11,358 ^a	3,246	1,752 ^a	2.0	1.6	7.0	38.9	0.6
Total, county	3.1	5.4	11,286	10,300	3,677	2,591	2.3	2.6	6.1	34.0	2.9

^aUrban balance of Brown County.

HOUSING CHARACTERISTICS

Area	Year-round Housing Units	Percent Rental Tenure	Vacancy Rate (%)		% Units in Multiple Dwellings		Median Monthly Contract Rent, All Rental Units (\$)	
			For Rent Only	For Sale Only	Owner-occupied	Rental		
			For Rent Only	For Sale Only	Median Value, Owner-occupied Dwelling Units (\$)	Rental Units (\$)		
Inside central city	27,057	33.3	4.3	0.5	9.0	77.9	15,800	85
Outside central city	17,745	16.7	6.6	0.9	3.2	52.1	18,900	104 ^a
Total, county	44,802	26.8	4.9	0.7	6.4	71.6	16,900	86

SOURCE: Computations by HASE staff from data reported by the 1970 Census of Population and Housing.

^aUrban balance of Brown County, which includes 59 percent of the county's population outside the central city.

populations separately, but their median income is slightly lower than that of the central city. Outside the urban area, about 10 percent of all families reported incomes below the poverty line, as compared with 5.5 percent in the central city.

Housing Characteristics

Brown County's housing stock consists mostly (74 percent) of single-family homes, and these are nearly all (88 percent) owner occupied. In 1970, there were about 11,700 renter-occupied housing units in the county, 26 percent of the total. About 30 percent of the rental units were single-family houses, about 40 percent were in duplexes, and the remainder were mostly in small apartment buildings. We estimate that there were fewer than 1,300 apartments in buildings of ten or more units in 1970. This distribution by tenure and type of structure is characteristic of metropolitan areas of this size.

Because of Green Bay's rapid population growth, its housing market has been relatively tight in recent years. In 1970, the city's rental vacancy rate was only 4.3 percent; although there is not much rental housing outside the central city (fewer than 3,000 units), the vacancy rate there was considerably higher, 6.6 percent.

Both rents and home prices were very close to national norms in 1970. The countywide median contract rent was \$86 (vs. \$89 nationally), and the corresponding gross rent (including tenant-paid utilities) was about \$106 (vs. \$110 nationally). The median value of owner-occupied homes was about \$16,900 (vs. \$17,000 nationally). Suburban rents and home prices were both about 20 percent higher than those in Green Bay, and rural housing costs were about 20 percent lower. So far as we can judge, these relationships reflect differences in the age and quality of housing more than differences in land prices or "neighborhood effects."

Since 1970, there has been considerable residential construction in the urban portion of the county. During the 3.5 years following the 1970 census, local permit data indicate the addition of nearly 6,000 units, with a net inventory gain of more than 3.5 percent annually. More than half the new units are in multiple dwellings, and unlike earlier multiple dwellings in Brown County, these usually contain five or more units. This new construction has been fully matched by household formation; our screening survey, conducted in September 1973, indicates a slightly lower overall vacancy rate than was reported by the 1970 census.

As elsewhere in the nation, rents and home prices have been rising in Brown County. The median contract rent reported in our screening survey was \$119, as compared with \$86 in 1970; the median value of owner-occupied homes was \$22,600, as against \$16,900 in 1970. These changes are equivalent to average annual increases of 11 and 10 percent respectively.

Heretofore, Brown County has made relatively little use of federal housing programs. At the end of 1973, HUD's Milwaukee Area Office reported a total of 1,285 subsidized units in the county, including 244 units of low-rent public housing, 335 units of private or nonprofit rental housing assisted under either Sec. 221(d)(3) or Sec. 236 of the National Housing Act, and 706 owner-occupied single-family homes assisted under Sec. 235 of the same act.⁵

⁵ The list excludes a few rural units assisted by the Farm Home Administration of the Department of Agriculture.

By all accounts, housing conditions in Brown County are not generally poor. There are no large slums or low-income ethnic ghettos; however, four older neighborhoods in central Green Bay have deteriorated enough to arouse local concern, reflected in the formation of a neighborhood rehabilitation committee to seek ways to improve them. There have been no large-scale residential clearance programs in Green Bay, although several hundred older residential units were removed to make way for a new bridge across the Fox River.

The amount of substandard housing in the county is of course a matter of definition; and differences in definition are compounded by difficulties in obtaining reliable measurements. The screening survey in the fall of 1973 sought data on a few key indicators of housing quality, safety, and crowding, and we have analyzed the data we obtained for rental housing.⁶ The quality defect most often reported was insufficient electrical outlets (9 percent of all rental units); the most common safety problem was inadequate fire exits (10 percent). No more than 9 percent of all renter households were overcrowded by any reasonable standard. We estimated that about a third of all renter households whose incomes were low enough to make them eligible for assistance under the experimental allowance program needed housing improvements or more space or both; however, some doubt is cast on this conclusion by the fact that a fourth of the ineligible renter households also lived in housing deficient by our standards. On the whole, we believe that conclusions about the incidence of substandard housing should await analysis of the much more comprehensive baseline interviews and of housing evaluations performed by trained personnel in the HAO.

Housing Costs and Incomes

The clearest housing problem in Brown County is not the present condition of the housing stock but rather the financial stresses imposed on low-income households, particularly elderly persons, by inflation in housing costs. Program standards of need for assistance are modest, intended only to enable program participants to afford well-maintained older housing without overcrowding (no more than two persons per bedroom). Yet the screening survey data on household incomes and household size indicate that about 4,400 renters and 7,800 homeowners in Brown County would need to spend in excess of a fourth of their adjusted gross incomes to obtain housing that meets program standards.

Table 8 shows the estimated distribution of households eligible for assistance, by tenure and size of household. The final column of the table shows the approximate upper limit of gross income (before deductions permitted under Sec. 23, but including imputed income from assets) for each size of household.

It is notable that over half the eligible households consist of one or two persons; and of this group, two-thirds are homeowners and three-fourths are headed by elderly persons.⁷ In other words, the elderly homeowner is a major target of the

⁶ See Ira S. Lowry, Barbara M. Woodfill, and Tiina Repnau, *Program Standards for Site I*, The Rand Corporation, WN-8574-HUD, January 1974.

⁷ Single persons living alone are eligible for assistance only if they are 62 years or more of age or disabled. All 2,665 one-person eligible households shown in the table are elderly persons; from other tabulations of screening survey data, we know that about 55 percent of the two-person eligible households and about 30 percent of the three-person households have at least one household head who is 62 or over. Altogether, we estimate that about 5,300 of our 12,200 eligible households are headed by elderly persons.

Table 8

ESTIMATED NUMBER OF HOUSEHOLDS ELIGIBLE FOR HOUSING ALLOWANCES, BY TENURE AND HOUSEHOLD SIZE: BROWN COUNTY, WISCONSIN, 1973

Number of Persons in Household	Number of Eligible Households			Income Limit for Admission (\$) ^a
	Renters	Owners	Total	
1	846	1,819	2,665	4,800
2	1,520	2,393	3,913	5,810
3	1,069	897	1,966	7,642
4	458	653	1,111	7,956
5	264	691	955	9,032
6	103	441	544	9,347
7 or more	166	895	1,061	10,674 ^b
All households	4,426	7,789	12,215	--

SOURCE: Tabulations by the HASE staff of data from the Site I screening survey, September 1973.

NOTE: Numbers of eligible households were estimated by adjusting each household's reported gross income to reflect deductions authorized under program rules. No allowance was made for imputed incomes from assets such as home equities, although program rules require that such imputed income be counted.

^aFor program purposes, income limits are specified only in terms of *adjusted* gross income; here, for general guidance of the reader, we show approximate *unadjusted* gross incomes corresponding to the actual limits. For one-person households, they are calculated as for a retired person over 62 years of age. In all other cases, the limits are calculated as for a household headed by a married couple, both under 62 years of age; it is assumed that only one household member is employed and that all other household members are dependents.

^bComputed for a household of seven persons.

housing allowance program in Brown County, requiring assistance to maintain his home in the face of rising costs and a relatively fixed retirement income.

Here again, a caveat must be entered. These estimates are based on screening survey income data, which were obtained in response to a single question about total household income; there were no questions about asset values. We do not yet know how such income data compare with incomes reported to (and verified by) the HAO, nor how gross incomes will be modified for program purposes by allowable deductions and imputations. The baseline household surveys, not yet analyzed, gather much more detailed information that we believe will enable us to refine our estimates of the pool of eligible households in Brown County, especially in conjunction with a systematic analysis of the HAO's experience with income reporting and adjustments to cash income.

POPULATION AND HOUSING CHARACTERISTICS OF ST. JOSEPH COUNTY

St. Joseph County lies on the northern border of Indiana, about 30 miles southeast of Lake Michigan (see Fig. 1, above). Like Brown County, St. Joseph is generally flat and consists mostly of farms, pastures, and woodlands. Its northeast corner is cut by the meandering St. Joseph River, which empties into Lake Michigan at Benton Harbor.

In earlier days, the river was an important means of transportation, and the county's only dense urban settlement developed at South Bend. Today, the location is significant because it lies in a major rail and highway corridor connecting Chicago and Gary, at the toe of Lake Michigan, to Toledo and Detroit, on Lake Erie.

As recently as 1950, the local economy was dominated by manufacturing establishments employing 55,400 persons, about half of the county's total employment of 110,000. By 1970, manufacturing employment had decreased to 32,500 out of a county total of 102,900, mostly because of a loss of jobs in the transportation equipment industry. At the end of 1963, for instance, the Studebaker Corporation closed its plant there, throwing 6,000 employees out of work.

The remaining manufacturing employment is predominantly in cyclically unstable industries: transportation equipment, electrical and nonelectrical machinery, and primary and fabricated metals. Since the beginning of 1970, the monthly unemployment rate has fluctuated considerably, from a high of 8.1 percent to a low of 3.0 percent.

Much of the slack in the local economy has been taken up by growth in trucking, warehousing, and wholesale trade and by the development of business and financial services with a regional, or even national, market. The local economy is also considerably affected by the presence of the University of Notre Dame (8,600 students), a campus of Indiana University (5,000 students), and several smaller colleges. Fewer than 1,000 people are employed in agriculture, although eight times that number still live on farms.

Demographic Characteristics

The map of St. Joseph County in Fig. 3 shows its minor civil divisions and outlines the area we designated as urban for our surveys and analyses.⁸

The total population of St. Joseph County in 1970 was about 245,000 (75,670 households). Its central city, South Bend, then contained 125,580 inhabitants, or just over half this total. The adjoining city of Mishawaka contained another 35,517 inhabitants. The rest of the urbanized area shown in Fig. 3 consists of portions of five townships: Clay (18,921 inhabitants in 1970), Penn (17,966), Portage (11,308), Center (7,078), and German (3,722). Altogether, this urbanized area accounted for 90 percent of the county's population. The rest of the county contained about 25,000 inhabitants, a third of whom lived on farms.

⁸ In 1970, the Census Bureau designated a smaller and much less regular urbanized area for South Bend. It included a narrow corridor north along the St. Joseph River to Niles, Michigan, and another corridor east to Elkhart, Indiana. The portion of this urbanized area that was in St. Joseph County contained 207,207 inhabitants then, as against 220,092 in the HASE urbanized area. We departed from the bureau's precedent partly to allow for extension of the urban fringe after 1970, but mostly to simplify field survey procedures.

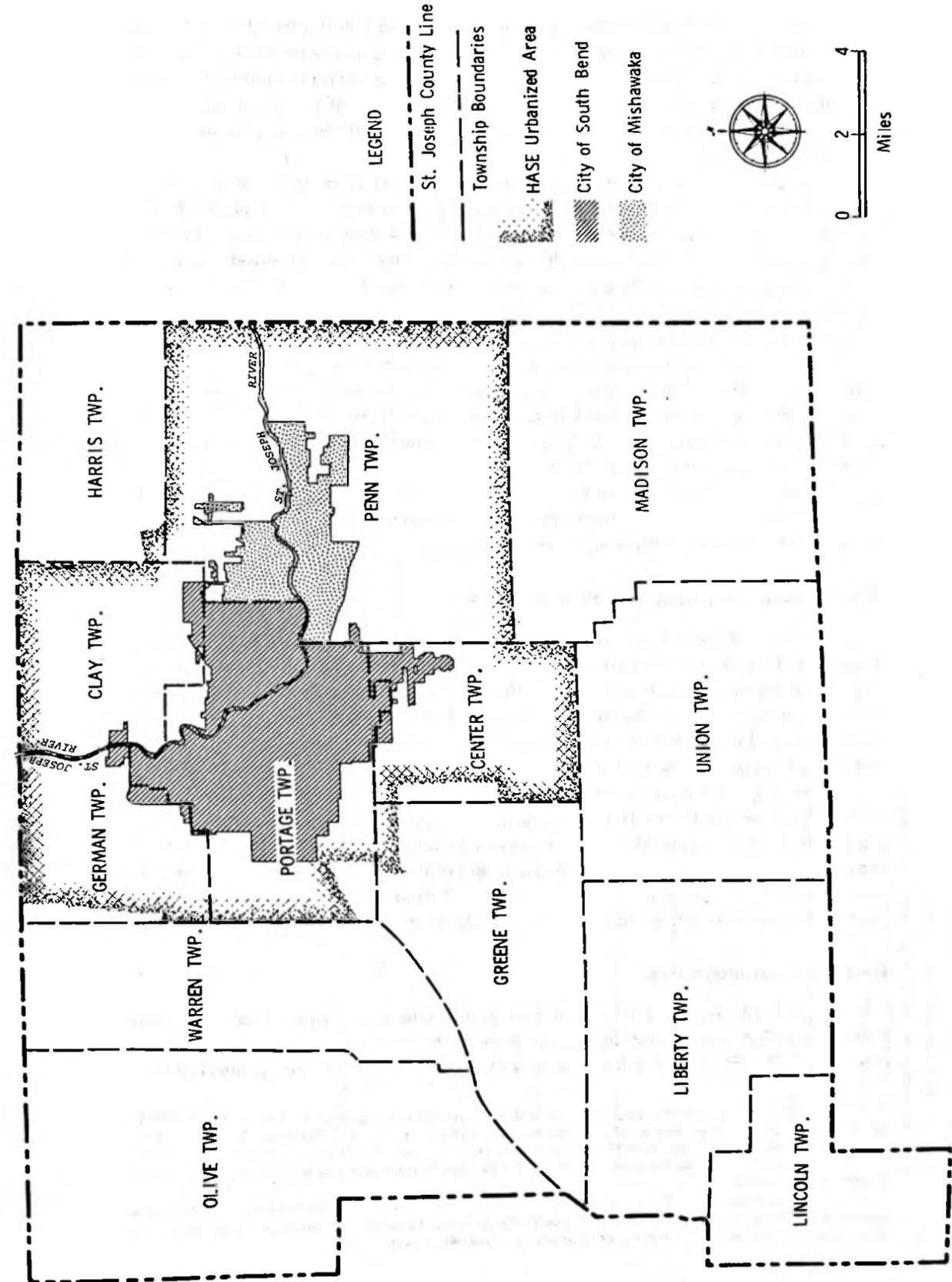


Fig. 3 — Political subdivisions of St. Joseph County, Indiana, and HASE urbanized area

Table 9 presents a statistical profile of St. Joseph County, based on data from the 1970 Census of Population and Housing. Here, the data are presented separately for the city of South Bend ("inside central city") and for the remainder of the county ("outside central city"); as indicated by footnotes, a few of the latter entries also include data for Marshall County because separate data for St. Joseph County were unobtainable.⁹

The demographic data in Table 9 are striking. Between 1960 and 1970, South Bend lost about 7,000 inhabitants; this is a net figure reflecting a gain of 14,000 from natural increases and minor annexations which was offset by net outmigration of more than 20,800 persons. Since the remainder of the county received fewer than 3,600 immigrants, South Bend's losses were clearly not due merely to suburbanization. Instead, they reflect a considerable movement out of the county that is best understood as the consequence of shrinking manufacturing employment.

Another important demographic feature of South Bend is its nearly 18,000 black and about 1,300 Chicano¹⁰ residents. Although the city as a whole lost population during the 1960s, its black population increased by a third. Later in this section we will examine the distribution of this group within the city; for now, we note only that few blacks live outside South Bend.

Although relatively few of the whites in St. Joseph County were foreign-born, or even native-born of foreign-born parents, ethnic identifications are strong. Polish, Hungarian, and German backgrounds predominate.

Employment and Income Characteristics

Despite its less stable economy, employment and income statistics for St. Joseph County in 1970 do not compare badly with those for Brown County. The unemployment rate among males was higher in St. Joseph County (4.1 vs. 3.1 percent), but median family incomes were about the same in both places; so were the percentages of families and unrelated individuals with incomes below the poverty level and the percentages reporting receipt of public assistance.

There is, however, an interesting contrast between the two places in income-geography. Whereas Green Bay's suburbs are considerably more prosperous, and its rural hinterland considerably less prosperous, than the city itself, the median incomes of South Bend's suburban and rural populations are about the same as the median income in the city itself. Very low incomes and welfare dependency, however, are more common within the central city than in the suburbs.

Housing Characteristics

Although St. Joseph County's urban population is 1.6 times that of Brown County, this fact was not notably reflected in the housing characteristics of the two places in 1970. St. Joseph's housing inventory contained a larger proportion (83

⁹ Marshall County is directly south of St. Joseph County and is included in the South Bend SMSA. However, it had fewer than 35,000 inhabitants in 1970, and its largest city (Plymouth) had fewer than 8,000 inhabitants. We did not include Marshall County as part of Site II of the Supply Experiment because we did not think its housing market would be significantly affected by events in St. Joseph County, or vice-versa.

¹⁰ Persons in households at least one of whose heads reported Spanish as a mother tongue. The census also enumerated nearly 4,200 persons in St. Joseph County who reported a Spanish-speaking country as their nation of origin but did not claim Spanish as a mother tongue.

Table 9
STATISTICAL PROFILE OF ST. JOSEPH COUNTY, INDIANA, IN 1970

Area	DEMOGRAPHIC CHARACTERISTICS										EMPLOYMENT AND INCOME CHARACTERISTICS										HOUSING CHARACTERISTICS						
	Total Population		Ethnic Minority		Percent Population Change Since 1960		Natural Increase 1960-1970		Net Migration 1960-1970		Unemployment Rate (%)		Annual Income (\$)		Percent Receiving Public Assistance		% with Income Below Poverty Level		% Workers Using Public Transportation		Year-round Housing Units	Percent Rental Tenure	Vacancy Rate (%)		Median Monthly Contract Rent, All Rental Units (\$)		
	Number	Percent	Black	Chicano	Number	Percent	Number	Percent	Number	Percent	Male	Female	Family Mean	Unrelated Individuals Mean	Fami- lies	Unrelated individuals	Fami- lies	Unrelated individuals	Owner-occupied	Rental			Owner-occupied	Dwelling Units (\$)			
Inside central city	125,580	17.737	14.1	1,267	1.0	-5.2	13,970	10.5	-20,835	-15.7	4.6	6.0	11,431	10,231	4,006	2,787	3.4	3.4	6.2	33.8	5.7	43,508	26.6	8.2	1.6	11,700	84 ^a
Outside central city	119,465	850	0.7	899	0.8	12.5	9,687	9.1	3,569	3.4	3.4	6.5	11,333 ^a	10,408 ^a	2,616 ^a	1,760 ^a	2.0 ^a	1.3 ^a	5.5 ^a	42.3 ^a	1.2	35,316	18.5	4.8	0.7	12,700 ^a	84 ^a
Total, county	245,045	18,587	7.7	2,166	0.9	2.7	23,657	9.9	-17,266	-7.2	4.1	6.2	11,443	10,389	3,351	2,111	2.6	2.4 ^b	5.7	37.7	3.5	78,824	22.9	7.0	1.2	12,400	84

SOURCE: Computations by HASE staff from data reported by the 1970 Census of Population and Housing.

^aUrban balance of South Bend SMSA, which includes 60 percent of the SMSA's population outside the central city and which may include portions of Marshall County.

^bIncludes Marshall County.

percent) of single-family homes and a smaller proportion (23 percent) of rental units than Brown County's. In St. Joseph County, only 53.8 percent of the rental units were in multiple dwellings, as compared with 71.6 percent in Brown County. Large apartment buildings were rare.

The county's housing market reflects the absence of population growth for two decades, especially the central-city population losses. Relatively few new homes were built, and the prices of old ones did not rise as much as we would otherwise have expected.¹¹ In 1970, median rents were about the same in St. Joseph and Brown counties; but it is important to note that in St. Joseph, almost half the rental units were single-family homes (vs. 28 percent in Brown County). At \$12,400, the median value of owner-occupied homes was only 73 percent of the corresponding figure for Brown County. The rental vacancy rate in the central city was then over 8 percent.

From 1965 through 1969, new residential construction in St. Joseph County averaged only 1,300 units a year, for an annual inventory increase of about 1.5 percent. Since 1970, the annual average has been only slightly higher, about 1,400 units, of which about 55 percent were single-family homes.

Over the last decade, South Bend and Mishawaka have made considerable use of federal housing subsidy programs. In August 1974, the two jurisdictions had a combined total of 1,289 units of low-rent public housing and nearly 1,600 units of private rental housing assisted under Sec. 221(d)(3) or Sec. 236 of the National Housing Act. There was also a small (300-unit) rent supplement program in South Bend, funded under Title I of the Housing and Urban Development Act of 1965. Though not technically a subsidy, FHA insurance under Sec. 207 and Sec. 221(d)(4) of the National Housing Act was instrumental in the financing of another 1,081 rental units. On the other hand, little use was made of homeowner subsidies under Sec. 235 of the National Housing Act; as of August 1974, there were only 286 such units in St. Joseph County, 90 percent of them in either South Bend or Mishawaka.

In short, most new construction of rental housing in St. Joseph County for the last decade has been federally assisted, and unassisted construction of single-family homes has been languid. From local permit data, we estimate that the total new construction between 1 April 1970 (the census date) and 1 July 1974 was about 6,200 units, of which about 3,400 were single-family homes and 2,800 were units in multiple dwellings. During the same period, about 900 units were demolished.

As in Site I, the screening survey of St. Joseph County will provide current data on housing quality and housing costs and their relationship to household sizes and incomes. Although the survey is complete, the data are not yet analyzed. In the meantime, our resident observer comments as follows about housing in the central city:

South Bend has a large stock of older houses that could potentially be affected by the experimental allowance program. The stock seems similar in age and building type to that in Green Bay, but portions of it are considerably more deteriorated. The units in disrepair seem neglected rather than poorly constructed. Rents and values of housing units are lowest in areas west and south of the downtown area.

¹¹ Between 1960 and 1970, the median contract rents in South Bend, Mishawaka, and the remainder of St. Joseph County all increased by about 42 percent; the median value of owner-occupied homes increased by only 12.5 percent in South Bend and about 26 percent in Mishawaka and the rest of the county. These figures may be compared with the increases over the same period in both Brown County and the nation as a whole: 54 percent for the median contract rent and about 40 percent for the median value of owner-occupied homes.

Although one could conclude from census tract data that the housing stock becomes uniformly worse as this area is approached, a tour of the city shows that some deterioration and/or abandonment is present in all the older areas of the city; conversely, even in the worst areas some units are in extremely good condition. The worst housing tends to concentrate in noncontiguous pockets, anywhere from one to 25 blocks in area.

There exists a large stock of older homes in the central city which need little or no rehabilitation and which sell for under \$10,000. For example, one three-bedroom house on the West Side, with a new furnace and electrical system and a remodeled interior, was on the market for \$9,900. . . . Even with today's high interest rates, program participants could afford this housing if mortgage funds were available.

Some Social and Political Geography of St. Joseph County

Because our on-site investigations in St. Joseph County began only recently and no systematic data have yet been obtained from the surveys, we cannot yet speak with much authority about community affairs there. However, we are already persuaded that this site differs markedly from Brown County with respect to its social and political geography and the general relevance of neighborhood boundaries to its residents. Two features stand out. One is the political relationship between South Bend and Mishawaka, and the other is the pattern of racial segregation in the housing market.

Figure 4 is a map of the adjoining cities of South Bend and Mishawaka. South Bend is older and larger, with a population 3.5 times Mishawaka's. The irregular boundaries of both places reflect their active annexation policies.

Mishawaka is largely a blue-collar suburb. In 1970, its median family income was about \$9,500, as compared with \$10,230 for South Bend. Less than 2 percent of Mishawaka's families reported incomes of \$25,000 or more, as compared with 4.5 percent in South Bend. Although South Bend has more variety, the 1970 housing stocks of the two places were similar in the proportions of single-family homes and multiple dwellings and of home ownership and rental tenure; they were also similar with respect to rents and housing prices.

Despite their many similarities, there is locally a strong sense of difference between the two jurisdictions. Mishawakans with whom we have spoken generally stress their community's insulation from the problems of poverty, crime, drug abuse, and social tension that they believe afflict South Bend; they have also expressed concern about political dominance by the larger city and are wary of any threat to Mishawaka's separate identity or self-government.

In several respects, the perceived social differences between South Bend and Mishawaka are open to question; at least, we do not find much supporting evidence for them in 1970 census data. There is, however, one very clear demographic difference of considerable social and political importance: South Bend's population in 1970 included 18,000 blacks, in contrast to the no more than 100 black residents in Mishawaka.

Figure 4 shows the distribution of the black population by census tract in 1970. The shaded tracts are those in which blacks accounted for at least 5 percent of the population; the circles increase in size as the percentage of blacks rises.

The sixteen shaded tracts in the figure account for over 90 percent of the county's black population. Fifteen of these are within the city of South Bend; the other, Tract 111, adjoins the city on its western border.

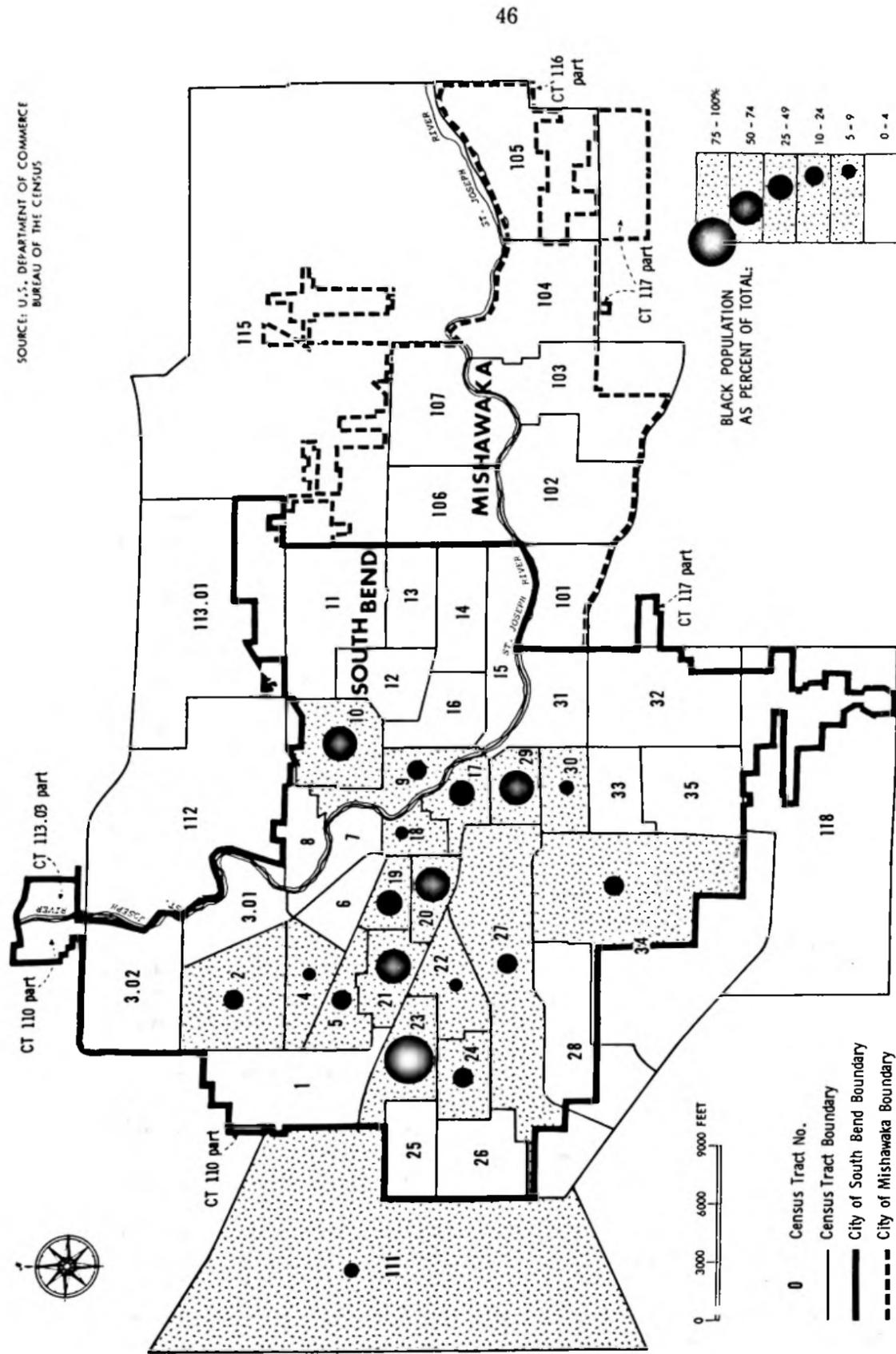


Fig. 4 — Census tracts in South Bend, Mishawaka, and adjacent areas, and distribution of black population in 1970

Although considerable residential segregation of blacks and whites is evident from the map, the boundaries between black and white neighborhoods are not as sharp as in some racially mixed cities. Only seven of these sixteen census tracts have populations that are more than one-fourth black, though these seven account for at least two-thirds of the county's black population.

Generally, the neighborhoods with the largest black populations are also those where housing conditions are poorest and property values are lowest. The two areas usually considered the worst in the city are the Southeast Side (approximately covered by Tracts 17, 29, and 30) and the West Side (approximately covered by Tracts 19, 20, and 21). In none of these six tracts did the median value of owner-occupied homes significantly increase between 1960 and 1970; in three of them, it decreased perceptibly. Yet our resident observer notes that

while the Southeast is clearly the worst area of the city, it is more appropriately termed a marginal rather than a slum area. Even in Tract 29, as many as one in ten structures are spic and span. Alleys and streets are reasonably clean and well cared for, and vacant lots, while overrun with weeds, are not overrun with garbage. . . .

The West Side contains no good or bad sections but only good and bad blocks or block faces. . . . A 1972 report on this area concludes that 50 percent of its 4,626 dwelling units need attention; 878 are substandard, 277 are dilapidated, and 1,063 are in deteriorating condition. However, many of the problems are those of obsolescence rather than neglected structures: inadequate wiring, poor insulation, old-fashioned kitchens and baths. . . .

The city government, with federal help, is actively seeking to improve the older and poorer neighborhoods of South Bend. In the last decade, it has spent \$1.5 million on rehabilitation loans and grants to property owners in two designated Federal Code Enforcement Areas, and has used Title I urban renewal funds to clear one blighted neighborhood for reuse as a park and for subsidized rental housing. The West Side was designated a Model Cities Neighborhood in 1968, and some \$6.2 million of federal funds has been spent there for social programs, including \$300,000 for housing rehabilitation.¹²

After the selection of South Bend as the jurisdiction within which the experimental housing allowance program would operate, the city decided to commit \$438,000 of revenue-sharing funds to rehabilitating owner-occupied homes in the Southeast Side. This program should bring many presently deteriorated homes up to levels that will qualify them for occupancy by allowance recipients, whose allowance benefits will then enable them to afford the subsequent maintenance.

COMPARING THE TWO SITES

On the whole, what we have learned about our two experimental sites since they were selected confirms us in our choices. Because their climates and physical settings are so much alike, their economic, demographic, and institutional differences are all the more striking. Although the housing stocks are similarly distributed by age and size of building, and although types of construction and tenure patterns are

¹² Title I funds have also supported a major downtown renewal project (\$35 million) and clearance of a decayed industrial area (\$7 million) that will probably be redeveloped as an industrial park.

not very different, the economic and social geographies of their housing markets contrast vividly.

Tables 10 and 11 summarize both the similarities and differences between the two sites. Some of the data shown in these tables were presented earlier, separately for each site; some are shown here for the first time.

The first point to note in Table 10 is the relative scales for the two sites. Although St. Joseph County is somewhat smaller than Brown County (466 vs. 524 square miles), its population is considerably larger. The number of inhabitants of St. Joseph County in 1970 was 1.5 times the corresponding figure for Brown County. However, Brown County is growing rapidly, while St. Joseph is not; if their respective 1960-to-1970 growth rates were to continue, their populations would be about the same size by 1990. More important is the fact that growth in Brown County is centralized in Green Bay, whereas St. Joseph County's central city has actually been losing population and its suburbs are not growing very rapidly.

Table 10

COMPARISON OF EXPERIMENTAL SITES: SELECTED DEMOGRAPHIC AND ECONOMIC CHARACTERISTICS, 1970

Item	Site I: Brown County			Site II: St. Joseph County		
	Total County	In Central City	Remainder of County	Total County	In Central City	Remainder of County
Number of inhabitants	158,244	87,780	70,464	245,045	125,580	119,465
Population changes, 1960-70 (%)	26.4	39.2	13.2	2.7	-5.2	12.5
Net migration, 1960-70 (%)	8.1	21.8	-5.9	-7.2	-15.7	3.4
Ethnic distribution of inhabitants (%)	100.0	100.0	100.0	100.0	100.0	100.0
White	98.2	98.5	97.8	91.0	84.4	98.2
Black	0.2	0.1	0.4	7.7	14.1	0.7
Indian	1.1	0.9	1.3	0.1	0.1	0.1
Chicano	0.4	0.4	0.4	0.9	1.0	0.8
Other	0.1	0.1	0.1	0.3	0.4	0.2
Number of households	43,560	26,336	17,224	75,666	41,282	34,384
Distribution of households by size (%)	100.0	100.0	100.0	100.0	100.0	100.0
1 person	14.7	17.5	10.3	16.8	19.8	13.1
2 persons	26.1	28.3	22.8	30.4	30.8	29.7
3-5 persons	42.0	40.5	44.2	43.5	39.4	48.5
6 or more persons	17.2	13.7	22.7	9.3	9.9	8.6
Median annual income (\$)						
Families	10,300	9,975	11,358 ^a	10,389	10,231	10,408 ^b
Unrelated individuals	2,591	3,026	1,752 ^a	2,111	2,787	1,740 ^b
Percent below poverty level						
Families	6.1	5.5	7.0	5.7	6.2	5.5 ^b
Unrelated individuals	34.0	32.1	38.9	37.7	33.8	42.3 ^b
Percent receiving public assistance						
Families	2.3	2.5	2.0	2.6	3.4	2.0 ^b
Unrelated individuals	2.6	3.1	1.6	2.4 ^c	3.4	1.3 ^b
Unemployment rate (%)						
Males	3.1	3.6	2.5	4.1	4.6	3.4
Females	5.4	5.5	5.3	6.2	6.0	6.5

SOURCE: Computations by HASE staff from data reported by the 1970 Census of Population and Housing.

^aUrban balance of Brown County, which includes 59 percent of the county's population outside the central city.

^bUrban balance of South Bend SMSA, which includes 60 percent of the SMSA's population outside the central city and which may include portions of Marshall County.

^cIncludes Marshall County.

Table 11

COMPARISON OF EXPERIMENTAL SITES: SELECTED HOUSING-MARKET CHARACTERISTICS, 1970

Item	Site I: Brown County			Site II: St. Joseph County		
	Total County	In Central City	Remainder of County	Total County	In Central City	Remainder of County
Number of housing units ^a	44,802	27,057	17,745	78,824	43,508	35,316
Renter-occupied	11,656	8,783	2,873	17,317	10,973	6,344
Owner-occupied	31,904	17,553	14,351	58,349	30,309	28,040
Vacant	1,242	721	521	3,158	2,226	932
Incidence of rental tenure (%) ^b	26.8	33.3	16.7	22.9	26.6	18.5
Rental units in multiple dwellings (%)	71.6	77.9	52.1	51.4	60.0	40.1 ^c
Rental vacancy rate (%)	4.9	4.3	6.6	7.0	8.2	4.8
Median contract rent (\$/month)	86	85	104 ^d	84	84	84 ^e
Median gross rent (\$/month)	106	105	124 ^d	107	107	108 ^e
Median value of owner-occupied homes (\$)	16,900	15,800	18,900	12,400	11,700	12,700 ^e

SOURCE: Computations by HASE staff from data reported by the 1970 Census of Population and Housing.

^aYear-round housing units only.

^bFor occupied housing only.

^cBased on data for rest of South Bend SMSA, which includes 2,561 rental units in Marshall County.

^dUrban balance of Brown County; for rural rental housing, the median contract rent is \$60 and the median gross rent is \$88.

^eUrban balance of St. Joseph and Marshall counties (South Bend SMSA). For rural rental housing in these two counties, the median contract rent is \$68 and the median gross rent is \$99.

The difference in the patterns of population growth in the two sites puts quite different strains on their housing markets. Whereas landlords and homebuilders in the central area of Brown County have faced an expanding market and low vacancy rates, the reverse has been true of the corresponding area of St. Joseph County. There, we find a price-depressing surplus of housing, especially of older single-family homes.

Another important difference between the two sites is in the ethnic composition of their populations. Although the great majority of inhabitants in both sites are whites of northern or central European descent, Brown County has only one other ethnic group (American Indian) whose population exceeded 1,000 in 1970. In St. Joseph County, there were nearly 18,600 black and 2,200 Chicano residents in 1970, most living in the central city. We hardly need add that the presence of a large, easily recognizable, and generally disadvantaged minority population profoundly affects the way a local housing market operates.

From our perspective, the number of households in each site is perhaps a better measure of experimental scale than the number of persons. In 1970, Brown County had 43,560 households, as compared with 75,666 in St. Joseph County. However, Brown County's households were distinctly larger, with a mean size of 3.6 persons, as against 3.2 in St. Joseph County. Especially notable is the frequency of large households in Brown County.

In 1970, the economic circumstances of the two populations were much alike, as measured by median income, the percentage of the population below the poverty

line, the percentage receiving public assistance, and unemployment rates. However, other data show that Brown County's economy is cyclically more stable than that of St. Joseph, whose earlier commitment to heavy manufacturing has cost the community in terms of fluctuating employment and, even more serious, long-term decline in these industries.

Table 11 compares the two housing markets directly. The numbers of housing units naturally scale with the numbers of households, discussed above. Rental tenure is slightly more common in Brown than in St. Joseph County, and considerably more of Brown County's rental units are in multiple dwellings. Considering the relative sizes of the two housing markets, the greater incidence of renter-occupied apartments in Brown County is somewhat surprising. However, given the depressed state of St. Joseph County's housing market, especially in its central area, we suspect that many single-family homes that were formerly owner occupied have entered the rental market.

Rental vacancy rates in 1970 were considerably higher in St. Joseph County than in Brown County; the difference is especially striking for the central cities. For Brown County, we know that these rates have not changed much since 1970; if anything, they have decreased. Some officials in St. Joseph County have argued that although the Census Bureau's estimate of the rental vacancy rate in 1970 may have been technically accurate, it was misleading in that it included a substantial number of newly constructed apartments that were not yet available for occupancy. There is also a widespread local belief that the rental market in 1974 is much tighter than it was in 1970, but the evidence is mostly anecdotal and pertains to new and more expensive apartments. When we have analyzed the data from the screening survey, we can better judge the current state of the market.

The similarity of median rents in the two sites in 1970 is striking; they differ mainly in that suburban rents in Brown County are about 15 to 25 percent above those in suburban St. Joseph County. However, it should be recalled that a contract rent of \$84 was considerably more likely to be for a single-family house in South Bend than in Green Bay, where single-family rentals are less common.

Unlike contract rents, the values of owner-occupied homes differed generally between the two sites in 1970. Whether median values in the central city, in the suburbs, or in the county as a whole are compared, values for St. Joseph County were around 70 percent of those for Brown County. We judge that the lower figures for St. Joseph County reflect the relatively small numbers of new homes built there during the 1960s, as well as depressed prices for existing homes; and both circumstances reflect a decade of net outmigration from the county in amounts that almost offset natural increases.

The manifest economic and social differences between the two sites suggest that the experimental housing allowance program may serve substantially different purposes in each. Certainly, local views on the value of the program have different emphases in the two sites. Brown County tends to view the program principally as an aid to the elderly and secondarily as a general means of forestalling housing deterioration. In South Bend, emphasis is usually placed on the program's reinforcement of local efforts aimed at salvaging already deteriorated neighborhoods west of the river. Mishawaka, by a close vote of its common council, declined to participate, despite the evidence we offered that the main beneficiaries there would be elderly homeowners. County officials seemed generally skeptical that the program would benefit many people outside South Bend.

In any event, by operating the experimental program in two such different environments we expect to obtain a more balanced view of the potential role of housing allowances as a tool of national housing policy. For all their differences, neither site is an extreme case in the spectrum of the nation's metropolitan housing markets; roughly speaking, they bracket the interquartile range of values for most of the structural variables we have discussed. Although we anticipate considerable difficulty in ascribing differences in program effects to specific structural differences in the housing markets of our two sites, we think the site-selection strategy has greatly diminished the dangers inherent in extrapolating national policy from local evidence.

HIGHLIGHTS OF THE BASELINE SURVEYS FOR SITE I

Since completion of fieldwork for the baseline surveys for Site I in April 1974, the HASE Survey Data Preparation Group has been principally occupied with transforming each completed questionnaire and observation form into a machine-readable record, cleansed of errors and ambiguities. The number of such documents returned from the field is large: 2,110 completed landlord interviews, 2,996 completed tenant interviews, and 891 homeowner interviews, plus shorter observation forms for 6,750 residential buildings and 8,660 street segments.

Although the task is not yet completed, it was far enough advanced at the end of September to enable HASE analysts to take their first systematic look at data that were collected from landlords, tenants, and homeowners. Here, we report briefly on their observations.

It is important to note the limitations of the findings reported below. They are based on a systematic tabulation of "marginals"—i.e., the coded entries in each response field of the survey instrument. Given a series of related questions aimed at eliciting a full response, these tabulations do not aggregate data across response fields. Nor do they provide the cross-tabulations of related variables that are often needed to interpret the pattern of responses.

Finally, the tabulated marginals are unweighted, each record counting equally in the distribution of responses. Since we intentionally sampled at different rates within each of eighteen strata of residential properties, the composition of the sample is quite different from the composition of the pool of all potential respondents in Brown County. The reader can gain some insight into the sampling biases that may be reflected in these tabulations by reviewing Tables 4, 5, and 6 in Sec. II, which describe the composition of the sample though not the composition of the population from which it was drawn. Generally, among rental properties we undersampled landlords and tenants of properties with high rents and those with two to four housing units; and the sample of homeowners is far smaller than the sample of tenants, approximately reversing their proportions in the population of households.

The Survey of Landlords

The marginals for the landlord survey are based on a nearly complete file of 1,963 records out of an expected total of 2,110. The remaining records, not yet cleaned, are mostly for landlords who have more than one property in our sample. The tabulations do not distinguish between landlords of different types of property:

single-family rental houses, duplexes and small apartment buildings, and large multiple dwellings, all in both urban and rural settings. They are nonetheless interesting because so few data on landlords are available from other sources.

The survey instrument seeks data on the characteristics of the property, its occupancy status, its revenues and expenses, and its mortgage financing; and on the characteristics of the landlord and his perceptions of the property, the neighborhood, and his tenants. The findings on each topic are summarized below.

Characteristics of Rental Properties. About half the rental properties in the sample are essentially single-family homes and half are multiple dwellings. Mixed residential and commercial uses are rare. The main buildings on these properties range widely in age, with a median of 43 years; more than a fourth are over 60 years old. About a fourth of them have been significantly modified at some point in their histories, most frequently by subdivision into more housing units or by addition of new units.

Occupancy Status. At the time of the interview, 93 percent of the properties in this sample were fully occupied, 5 percent were partially occupied, and 2 percent were completely vacant. Two-thirds of the landlords reported no rent losses from vacancies during 1973, and only 40 percent reported any tenant turnover.

Revenues and Expenses. Perhaps the most significant early finding about income and expenses is that Mathematica's interviewers were generally able to obtain answers to detailed questions on this topic. To construct a complete income and expense statement for any one property requires valid responses to each of 54 questions. In the 1,963 survey records, these response fields altogether contain 1,592 codes indicating unusable data or item nonresponse, an average of less than one such code per record. According to the interviewers, only 4 percent of all respondents gave them manifestly unreliable information, and over a third consulted their records for at least some items.

Mortgage Financing. More than half the rental properties in the sample are owned free and clear. For those reported to carry mortgages, 90 percent are first mortgages. Most often, the original amount of these mortgages was between \$5,000 and \$10,000 and the terms from twenty to twenty-four years. Although most of these mortgages were written some years ago, three-fourths of them carried interest rates of 7.0 percent or more in early 1974.¹³

Characteristics of Landlords. Over 90 percent of the properties in the sample are held in personal ownership (as distinguished from a partnership or corporation), and a fourth of the owners live on the property. Nearly 40 percent hold other rental real estate besides the subject property, but these holdings are usually quite small. Nearly 60 percent of the noncorporate landlords have some other fulltime occupation, and only a fourth of them reported that income from real estate accounted for more than 15 percent of their total income.

Landlords' Perceptions of Their Properties as Investments. About a third of these landlords acquired their properties primarily as personal residences, and about 20 percent still view them in that light. Nearly 80 percent expected them to increase in value, and 94 percent expected their financial returns from the properties either to improve or to stay the same. Virtually all considered their properties

¹³ Brown County lending institutions generally write mortgages that provide for periodic adjustments in interest rates at the discretion of the lender. Nationally, such terms are rare.

to be in either good or fair physical condition, but 15 percent planned major capital improvements during the coming year. Only 24 percent had raised rents for any of their tenants during 1973, and about the same proportion planned rent increases during the coming year. A surprising 57 percent said they would not raise rents during the coming year even if their costs increased.

Landlords' Perceptions of Neighborhood Trends. Generally, these landlords held the neighborhoods in which their properties were located in high regard. They thought that surrounding buildings and grounds were in either good or fair condition and were rarely disturbed by recent changes in neighboring land uses or in the characteristics of residents. The problems that most frequently concerned them related to traffic, noise, and air pollution. Complaints about juvenile delinquents, drunks, or drug users were notably rare.

Landlords' Relations with Tenants. Most of these landlords were on easy and informal terms with their tenants. Only a third of the landlords checked the credit records of prospective tenants, only 10 percent required leases, and only 30 percent required security deposits. Less than 10 percent thought that good tenants were getting harder to find, and 26 percent thought their current tenants took better care of the property than the previous tenants. They reported few tenant complaints about the amount of the rent (2 percent) or about maintenance or repairs (8 percent). Twenty percent of the single-family residences and an appreciable number of units in multiple dwellings were occupied by relatives of the landlord.

Survey of Tenants and Homeowners

In order to get an early look at the survey data for tenants and homeowners, we selected a systematic 25-percent sample of all completed questionnaires that had been forwarded to us from the field and expedited their processing by the Survey Data Preparation Group.¹⁴ When they were tabulated in September, these 962 records were only partially cleansed of errors and ambiguities, and the answers to a few open-ended questions had not been coded into machine-readable form. Thus, the tabulations of marginals for this survey are both less crisp and less comprehensive than those for landlords.

Tenants and homeowners were interviewed with the same survey instrument, although many of the questions were addressed only to one or the other type of respondent. The tabulations run across both tenure groups. Thus, in tabulations of household characteristics, we are usually unable to distinguish tenants from homeowners; but in tabulations of responses to questions addressed only to tenants or only to homeowners, the tenure of the respondent is self-evident.

Finally, we again remind the reader that these tabulations weight each survey record equally, even though different strata of tenants and homeowners were sampled at very different rates. Consequently, the distribution of values for any given variable in the sample could be quite different from its distribution in the general population from which the sample was drawn. The most important distortions are likely to be in distributions of household characteristics, where renters and homeowners are combined: Seventy-five percent of our sample of households are renters

¹⁴ The complete file of 2,996 tenant interviews and 891 homeowner interviews is scheduled to be ready for audit and analysis in December or January, about nine months after the end of fieldwork.

and 25 percent are homeowners, almost exactly reversing the proportions of each group in the population of Brown County. Furthermore, both tenants and homeowners who live in expensive housing were undersampled. Among tenants, we under-sampled those in duplexes and small multiple dwellings. Also, we should note that landlords living on their properties were not interviewed in their capacities as homeowners.

The survey instrument seeks data on the characteristics of the respondent and his household, the characteristics of his housing unit, rent and other housing-related expenses (including mortgage expenses for homeowners), residential mobility and housing-search procedures, satisfaction with housing and neighborhood, and (for tenants) relations with landlords. In the highlights presented below, we have avoided commenting on variables whose unweighted distribution would manifestly be badly biased by the sample design and on those that were adequately covered by the earlier discussion of 1970 census data.

Characteristics of Households. Our most startling information on households in Brown County comes not from the baseline survey but from the screening survey conducted about three months earlier. The screening survey records, appropriately weighted, indicate that there has been a sharp increase (35 percent) in the number of two-person renter households in Brown County since 1970. These newly formed households, as one might expect, are mostly young couples, one or both employed. With this exception, the distribution of households by size and by age and sex of heads is about the same as in 1970. In September 1973, 43 percent of all households in Brown County consisted of either one or two persons, and 19 percent were headed by one or more persons of age 62 or over.

Residential Mobility. Because it consists so largely of renters, the household sample is extremely mobile. Over 42 percent moved to the address where they were interviewed either in 1973 or early in 1974. Over 45 percent had moved at least twice during the five years preceding the interview, and 27 percent had moved at least three times. Only 30 percent had lived at their current address for as long as five years.

That the movers are nearly all renters is indicated by tabulation of a question addressed only to homeowners. Of all homeowners in the sample, less than 8 percent had acquired their home during 1973 or early 1974, and more than 70 percent had owned that home for at least five years.

Less than a fourth of all movers came directly to their present addresses from locations outside Brown County.

Housing Search and Cost of Moves. Those searching for housing in Brown County seldom relied on professional assistance. Nearly half of them depended mostly on newspaper advertisements, and a fourth found their homes through a friend or relative. Real estate agencies were involved in only 6 percent of the cases. (Nearly all those asked this question were renters.)

When asked whether they had encountered problems in renting or buying their present homes because of personal or household characteristics, about a fifth of our respondents indicated that there had been difficulties over children or pets, and 9 percent reported difficulties relating to marital status. Complaints about race or nationality were rare, but if we assume that all were made by the few nonwhites in our sample, about 40 percent perceived some discrimination. (Again, nearly all respondents were renters.)

Recent movers were also asked to report the money costs of their last move. Forty-four percent spent nothing at all, and 74 percent spent \$25 or less. These, presumably, were local moves. But only 6 percent spent over \$100, whereas nearly a fourth of all last moves were from a place outside the county.

Mortgage Financing for Homeowners. Nearly half of the homeowners in the sample owned their properties free and clear. Of those whose homes were mortgaged, 89 percent had only a first mortgage; and of these mortgages, 80 percent were written for amounts of \$15,000 or less. The payoff periods varied from ten to thirty years or more, without much concentration. Interest rates also varied greatly, from less than 5.0 percent to more than 8.0 percent per annum; but about half of these first mortgages carried interest rates of between 7.0 and 7.9 percent.¹⁵

Perceptions of Housing and Neighborhood Conditions. Survey researchers believe that there is usually an upward bias in responses to "satisfaction" questions. If so, it may account in part for the expressed complacency of these respondents about their housing and neighborhoods.

Fifty-eight percent described themselves as "very satisfied" with their housing and 33 percent as "somewhat satisfied"; only 9 percent expressed negative views. When questioned about specific features, they most frequently complained about refrigerators (10 percent) and inadequate space (6 percent).

The respondents were equally satisfied with their neighborhoods, only 8 percent expressing negative views in general or, in particular, about its safety or quality. However, about 30 percent complained at least mildly about each of the following problems: noise, air pollution, traffic, street condition (in midwinter), and lack of recreational facilities for teenagers. About 15 percent thought that their neighborhoods had improved over the preceding three years.

Tenants' Relations with Landlords. The tenants in the sample generally confirm the impressions obtained from the landlord survey about landlord-tenant relationships. Only 12 percent of the tenants reported that they signed leases when they moved in, and only 8 percent had leases currently in effect. A fourth of them had direct contact with their landlords as often as once a week, and two-thirds saw their landlords at least once a month. Of those who felt able to comment on their landlords' policies concerning late payment of rent, only 17 percent thought that their landlords were inflexible.

Generally, these tenants seem to be satisfied with their landlords. One measure, not foolproof, is the frequency of their complaints to landlords about specific problems. Leading each respondent through a list of the most common bones of contention, we asked whether he had ever contacted his landlord about each. We found only one item, maintenance and repairs, that had prompted a landlord contact (not necessarily a complaint) by more than 15 percent of the tenants. Of the 40 percent who remembered contacting their landlords about maintenance or repairs, over two-thirds were satisfied with the landlords' responses.

¹⁵ We remind the reader of the unusual practice of most lenders in Brown County, noted earlier: Mortgages there usually provide for periodic adjustments in interest rates at the discretion of the lender. Consequently, interest rates on existing mortgages do not lag the current market rate by as much as they do elsewhere.

V. RESEARCH PROBLEMS AND PROSPECTS

When the Supply Experiment was conceived early in 1972, it is fair to say that neither Rand nor HUD realized its complexity. However, some eighteen months were spent in planning both the experimental allowance program and the research program before any long-term commitments were made. By the end of that time, both institutions had a more realistic appreciation of their relationship and their agendas. We agreed then that the tasks before us, though difficult, were manageable; and that the results of the experiment promised to be worth the effort.

During the past year, the two experimental sites were selected and HUD contractually committed funds to support a ten-year experimental allowance program in each. The program itself has moved from design to implementation in Site I, where a number of low-income households are enrolled and receiving payments. A full cycle of field surveys has also been completed there and the data that were gathered are now being analyzed. In Site II, the baseline surveys are imminent, and the HAO there is recruiting and training staff with the intention of beginning enrollment in December.

There is still a long way to go. Assuming that information gathered along the way does not lead to a change in the length of the monitoring program, the last annual field survey will be conducted in Site I during the first half of 1979, and the data will be processed and analyzed during the remainder of that year. In Site II, the last survey cycle is scheduled for the first half of 1980, with data processing and analysis to follow. It seems unlikely that our final reports on the Supply Experiment will be completed before 1981.

It would be a mistake, however, to think of 1981 as the "payoff" year. The Supply Experiment is designed to gather information bearing on national housing policy, and this information flows from program experience and monitoring activities in a continuous stream. Even the early research planning did much to clarify which housing problems a national allowance program could address and what program features would be needed to fulfill alternative objectives. And in creating an institution to manage a fullscale local allowance program, we grappled with and resolved the same kinds of administrative and procedural problems that would arise in a national program; some observers have suggested that this experience will prove even more valuable to policymakers than the formal research studies.

Nor do we expect the usefulness of the Supply Experiment to end with our final report on its results. Although there is no shortage of anecdote and opinion about the way metropolitan housing markets work, there are hardly any data with which to verify (or challenge) either the general folklore of the market or the specific assumptions underlying formal models of market dynamics. Because of the market-wide scope of the five-year monitoring program, the frequency of the planned observations, and the fact that data for the same property, household, or landlord can be linked over time, we expect the data files of the Supply Experiment to be of unparalleled usefulness in housing-policy research, both before 1981 and for years afterward.

AGENDA FOR THE COMING YEAR

In the meantime, we must accomplish the research mission outlined in Sec. I. During the coming year—i.e., from 15 October 1974 to 15 October 1975—the main items on our agenda are the following:

- Auditing and analyzing baseline data for Site I. During the first half of 1975, we plan to issue a series of reports describing the housing market of Brown County as it was before the allowance program began. Depending on the data, the topics may include
 - The physical characteristics of the housing stock.
 - The patterns of ownership, management, and financing for rental properties.
 - Maintenance, repair, and improvement policies.
 - Rental revenues and expenses.
 - Vacancy and turnover experience.
 - Characteristics of tenants and homeowners.
 - Residential mobility and associated factors.
 - Relationships between income and housing expenditures.
 - Housing preferences of tenants and homeowners.
 - Relationships between neighborhood characteristics and property values.
 - Characteristics and policies of market intermediaries and indirect suppliers.
- Auditing and analyzing records of the allowance program, covering its first six months of operation. Possible topics are
 - Trends in enrollment and characteristics of enrollees.
 - Ability of enrollees to find certifiable housing.
 - Rents paid by allowance recipients.
 - Residential locations of allowance recipients.
 - Problems in program implementation.
- Constructing baseline accounts for the supply response analysis, modeling production functions, and fitting hedonic indexes for housing services.
- Selecting the permanent panel of residential properties in Site I and conducting the second wave of surveys of residential buildings, landlords, tenants, homeowners, and market intermediaries.
- Selecting the baseline sample for Site II and conducting the surveys of residential buildings, landlords, tenants, homeowners, and market intermediaries; completing the survey of neighborhoods.
- Editing, keypunching, coding, and cleaning all Site II baseline survey records and some Site I second-wave survey records.
- Producing second-wave survey instruments for Site I, revising them as needed for use in Site II, and designing third-wave survey instruments.
- Documenting sample-selection procedures in both sites, checking the validity of the samples, and computing appropriate sampling weights for individual records.
- Completing the design and most of the implementation of the postbaseline data management system for combining and linking files of survey records and for retrieving the data in these files for research purposes.

- Providing technical support to and monitoring the operations of the HAOs in both sites.

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 now anticipated. While Rand and HUD have 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 events and uncertain outcomes.

Below, we list a number of problems that currently concern us. We do so not because we are pessimistic about the 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

While there is still much to learn about the efficient administration of the allowance program, we judge that the HAOs as institutions are so structured that learning is feasible and procedural changes can be implemented without inordinate delay. As evidence, we can point to the speed with which enrollment problems in Site I have been diagnosed and corrective actions taken.

Participation Rates. A larger uncertainty, one that affects the organization of the HAOs and their ability to operate within budget, is the number of households that will enroll in the program and the speed with which they find certifiable housing in the local market. We are confident that the pool of eligible households in each site considerably exceeds the enrollment targets. How many will choose to enroll is less certain, depending (we suppose) on the public image of the program, the levels of benefits it provides, the impact of inflation on household budgets, and the experiences of the earliest applicants and enrollees.

Benefit Levels. Some of these factors can be at least partially controlled by the HAO, some by HUD, and others not at all. Benefit levels fall in the second category, and they concern us in two respects. One is that nationally the cost of housing services is rising at a rate approaching 10 percent annually. The current benefit schedule in Site I is based on the standard cost of adequate housing in September 1973. HUD and Rand must jointly consider the appropriate programmatic response to background inflation.

We are also concerned about the benefit levels established by HUD for one-person elderly households. These are based on the standard cost of an efficiency apartment or rooming-house unit. Few such units exist in the experimental sites, and more than half of the eligible single persons are homeowners whose houses are larger and presumably more expensive to maintain than this standard implies. Whether allowance-assisted elderly persons can obtain or maintain certifiable housing without undue budgetary strain is at least uncertain; Rand and HUD agree that the issue will need careful periodic review in the light of program experience.

Program Jurisdiction in Site II. A third uncertainty concerns the future of the allowance program in Site II. Its present jurisdiction is the city of South Bend; for experimental reasons, it is highly desirable to encompass the entire metropolitan housing market. The program funds that have been committed would support this expansion; the matter lies in the hands of two local governments. If either or both join the program, the HAO must reorganize to cope with the increased workload.

Research Design

The research design for the Supply Experiment is a complex of interlocking parts, most of which serve multiple purposes. In constructing it, analysis plans were developed to provide answers to four different but interrelated clusters of policy-relevant questions. From these plans, we determined the data requirements and designed a five-year program of field surveys to obtain the data. The size and composition of the survey samples reflect targets for analytical reliability as well as a priori estimates of fieldwork costs and field-response rates in successive waves of interviews. The survey instruments themselves reflect painful compromises between demands for data that would increase the power of the analysis and the cost and technical difficulty of obtaining these data. The entire research agenda is linked in various ways to the scale and timing of enrollment in the experimental allowance program.

No doubt we have overlooked some design defects, but we are satisfied that our *General Design Report* and supporting studies present a coherent research program, with some plans deliberately left open until field experience can instruct us how to proceed. Certainly, the design was thoroughly reviewed—by Rand, by HUD, and by a panel of distinguished critics selected jointly by Rand and HUD.¹

A problem with these intricate research specifications is that midcourse changes in them are perilous. Field experience, new personnel, new ideas, and external events all prompt sensible "local" revisions to the research design, revisions whose broader implications may go unnoticed. We think the experimental design is too sturdy to be irreparably damaged by such oversights, but we frequently wish for more time to consider the full consequences of hurried decisions.

Recent Design Changes. One such occasion came in the late spring of 1974, during negotiations with HUD over the HASE research budget for the coming year. It then became clear that the estimated cost of our agenda exceeded HUD's budget for HASE research. For several weeks, the senior staff of HASE wrestled with cost-reducing options, trying to estimate their implications for the research design and for the research budget simultaneously. In the end, we agreed with HUD on eight changes in the research agenda:

1. Reduce the number of residential properties in the permanent panel for each site by 10 percent.
2. Reduce the sample of empaneled housing units in each large multiple dwelling from six to four.
3. Eliminate from all future survey cycles three small-sample surveys that

¹ See *Proceedings of the General Design Review of the Housing Assistance Supply Experiment*, The Rand Corporation, WN-8396-HUD, October 1973; and Ira S. Lowry (ed.), *General Design Report: Supplement*, The Rand Corporation, WN-8364-HUD, August 1973.

had been conducted at baseline in Site I to provide a statistically well-defined pool of properties for panel updating. These were surveys of owners of seasonal properties, owners of nonresidential properties that could later be converted to residential use, and owners of unimproved urban land.

4. Conduct the survey of neighborhoods in each site on a thirty-month cycle rather than annually.
5. Eliminate a special study of property transactions in two marginal neighborhoods of Site I. Whether a similar study would be done in Site II was not resolved.
6. Limit systematic comparisons between survey data and data from other sources (principally the 1970 census) to the screening survey in each site. (Such comparisons were planned as part of the audit of each survey file, as a check on sample validity and reliability of responses.)
7. Indefinitely suspend plans for cross-instrument consistency checks (e.g., tenant vs. landlord responses associated with a given property).
8. Indefinitely suspend linking HAO records to survey records (e.g., for cases in which a program participant was interviewed in the surveys of tenants and homeowners).

We cannot discuss these changes at length here.² The first two have the broadest consequences because they reduce the number of observations available from each annual survey cycle and therefore the reliability of statistical inferences and the analytical flexibility of the data base. The third raises a technical problem of panel updating that we will seek other means to solve. The fourth desynchronizes the survey of neighborhoods from our other surveys, adding "noise" to analyses that relate other variables to neighborhood change. The fifth limits what we will learn about the special effects of housing allowances in marginal neighborhoods. The sixth weakens the credentials of the survey data. The seventh has the same effect and also forecloses on a policy-relevant research topic. The eighth significantly reduces the power of data actually collected.

We would not have agreed to these changes if we had thought they were fatal to the mission of the Supply Experiment, but at least six of them increase the experiment's exposure to hazards of bad judgment or bad luck. Only the last four are reversible in that the data on which they depend are not perishable.

Uncertainties about Survey Response and Data Quality. From the beginning, we have recognized that the success of the planned analysis of supply response to the allowance program depends directly on our ability to obtain reliable information from landlords about their rental revenues and property-related expenses. There was only one precedent for seeking such information by mass-interviewing techniques, a precedent that was successful enough to persuade us that we could do better.³

² To better understand what these changes imply, the reader may wish to consult pertinent sections of the *General Design Report: First Draft*. The following Rand publications are relevant to specific items. For items 1, 2, and 3, see Timothy M. Corcoran, *Survey Sample Design for Site I*, WN-8640-HUD, March 1974; and *Sampling Nonresidential Properties: Site I*, WN-8623-HUD, March 1974. For item 5, see William G. Grigsby, Michael Shanley, and Sammis B. White, *Market Intermediaries and Indirect Suppliers: Baseline Report and Prospectus for Site I*, WN-8577-HUD, February 1974. For items 6 and 7, see Leonard G. Chesler and others, *Baseline Audit Plan*, WN-8612-HUD, February 1974.

³ See George Sternlieb, *The Urban Housing Dilemma: The Dynamics of New York City's Rent Controlled Housing*, New York City Housing and Development Administration and the Center for Urban Social Science Research, Rutgers University, 1972.

As reported in Sec. IV, landlords in Site I did answer our questions about these matters, and the interviewers thought that their answers were generally reliable. More stringent tests of data quality will soon be possible, once the answers given by each landlord are organized into an income-and-expense statement for his property. At the moment, we feel optimistic.

Subsidized Housing in Site II. During the months when we were threshing out the details of the research design, the leading candidates for the two experimental sites were both places that had made little use of federal housing subsidy programs. In thinking about marketwide monitoring and accounting, we gave short shrift to the special problems that subsidized housing, whether publicly or privately owned, presented for our analysis plans.

In Site I, we excluded subsidized housing and its occupants from the survey samples, planning to exclude them also from our supply-and-demand accounts. Although such housing is indeed rare in Site I, we now regret that decision. In St. Joseph County, which was finally selected as Site II, subsidized rental housing accounts for 18 percent of all rental housing. In South Bend, the jurisdiction within which the allowance program will (at least initially) operate, the fraction is smaller, about 14 percent. About half the rental units in Mishawaka are federally subsidized.

Though we foresee no immediate problems in conducting the experiment in this context, neither Rand nor HUD has thoroughly considered the issue. We have decided that subsidized housing in Site II should be included in the sample of residential properties, and that the occupants of such housing should be interviewed with the same instruments used for nonsubsidized occupants. We are now discussing tactics for interviewing the public and private owners of these properties (e.g., the South Bend Housing Authority) to obtain "landlord" data.

Community Attitudes. In Sec. III, we mentioned a problem that had arisen with the baseline survey instruments for Site II. One module of the instruments for landlords, tenants, and homeowners was designed to obtain information about the respondent's knowledge of the proposed allowance program and his attitudes toward it. In order to understand the sources of these attitudes (whether due to a general predisposition or to specific information, or misinformation, about the program), we included a series of questions on the general political and social views of the respondent.

This module was designed to provide data needed for analysis of community attitudes toward the allowance program, one of the four elements of the HASE research charter. Our analysts believe that background information on each respondent's political and social views is needed for two reasons. One is that such information could help us judge whether better public information about the program or modification of its design would much affect its acceptance by the community. Another is that national surveys have thoroughly classified the U.S. population in terms of these political and social views; cross-classifying our respondents by their general views and program attitudes, we could then extrapolate program attitudes to the national population.

It should be emphasized that both the general line of questioning and most of the specific questions that we proposed for these instruments have been widely used (e.g., by the Michigan Survey Research Center) without adverse reaction from respondents. Nonetheless, HUD and OMB were concerned about the propriety of such

questions in a federally funded survey (and also about the length of the instrument) and eliminated most of them. Lacking the data that these questions would have elicited, our analysis of community attitudes toward the allowance program will necessarily be restricted in its scope.

Field Surveys

Although our baseline surveys in Site I were designed and fielded under intense schedular pressure, we judge from the results that we were generally successful in meeting survey objectives, despite our many improvisations.⁴ The most persistent problems were administrative; we found that our systems for controlling the flow of field materials and tracking field progress were inadequate for such a complex agenda. Our attempts to improve these systems in midcourse were only partly successful.

For baseline surveys in Site II, and for subsequent survey cycles at both sites, we have now designed and programmed a record management system that will provide an orderly flow of field materials and accurate weekly reports on field progress, and will also greatly simplify postsurvey accounting. We have also systematized forms and procedures for reporting a variety of field events and problems that were handled ad hoc in Site I.

If these reforms accomplish their purposes, survey operations for subsequent cycles will become more routine, requiring close management attention but far less improvisation. We nonetheless have several remaining concerns.

Sample Sizes and Field Procedures. Sample sizes planned for our screening and baseline surveys in each site reflect target numbers of completed interviews in each sample stratum and a priori assumptions about completion rates. An interview attempt may fail for a variety of reasons, the most frequent being inability to contact the desired respondent or his refusal to grant the interview.

For our permanent panels, we propose to select only residential properties for which we have obtained a complete baseline record—i.e., a field observation of the property (survey of residential buildings), an interview with its owner, and for rental properties, an interview with at least one tenant. Annually thereafter, we will attempt the full agenda of observation and interviews for each empaneled property, regardless of prior contact failures or refusals. The original design target was to obtain 1,000 complete five-year property records in each site, which we thought we could achieve with a panel of about 2,250 properties.⁵ Subsequent problems with the HASE research budget compelled us to reduce the target of complete five-year records to 900, requiring a panel of about 2,000 properties.⁶

The frequency of contact failures and refusals is important for three reasons. First, once a sample size is fixed, the field-completion rate determines how many observations are available for analysis. In the permanent panel, failures to complete interviews in each annual cycle are compounded across cycles to determine the final

⁴ See Sec. II for a summary of field experience with each survey (especially Tables 4, 5, and 6), and Sec. IV for highlights of survey data.

⁵ See Timothy M. Corcoran, *The Effects of Nonresponse on Record Completion in a Panel of Residential Properties*, The Rand Corporation, WN-8174-HUD, April 1973.

⁶ See above, "Recent Design Changes."

number of five-year complete records.⁷ Second, both contact failures and refusals are potential sources of bias in our analyses: Respondents who are easily found and are willing to be interviewed may differ in important ways from those who are seldom home or who refuse the interview. Third, interview attempts, even if unsuccessful, are costly; the higher the completion rate, the smaller the proportion of resources that are wasted on fruitless attempts.

Survey Completion Rates. For all these reasons, we are very concerned about survey completion rates. Our experiences in Site I have been generally good. For the screening survey, the field-completion rate (the number of interviews completed divided by the number attempted) was about 86 percent. For the baseline surveys, the field-completion rate for landlords and for homeowners was 72 percent, well above our expectations. For tenants, it was 76 percent, somewhat below the expected rate of 85 percent, perhaps because we did not allow adequately for the difficulty of finding husbands and wives both at home for a joint interview. Overall, these results are encouraging and do not suggest any major changes in the survey agenda for Site I.

Site II is another matter. There, only the screening survey has been fielded; its field-completion rate was about 67 percent, as compared with 86 percent in Site I. Noncompletions were equally attributed to contact failures (16.2 percent) and refusals (16.5 percent). The outcome is less serious for the screening survey itself than for what it may imply about baseline and subsequent completion rates.⁸

Baseline Sample Adjustments in Site II. Rand and its Site II subcontractor have undertaken a careful review of all our experience to date, searching for ways to obtain higher completion rates at baseline; emphasis is on field strategies to reduce contact failures. In the meantime, we have adjusted the composition of the baseline sample to reflect the relative completion rates that we experienced in Site I for different classes of respondents. To achieve our completion targets there, we now believe we should schedule fewer homeowner and more landlord and tenant interviews.

Motivating Respondents. The fieldwork subcontractor for Site I urged that tenants and homeowners who completed the 90-minute baseline interview be offered \$5 as a token of appreciation and by way of establishing good relations with them for subsequent interviews. We approved this strategy, but did not plan a similar gratuity for landlords because we thought it would be less appreciated by these generally more prosperous citizens. However, reports from the field soon made us realize that we had misread their sentiments. A plan for landlord gratuities of \$5 per property (some were interviewed about more than one property) was quickly approved by Rand and HUD, and the surveys proceeded without further incident.

There is considerable uncertainty among survey professionals about the effects

⁷ Of course, records complete for some years but not for others are still useful for some but not all of our analyses.

⁸ The difference in screening survey completion rates in the two sites seems more likely to reflect environmental differences than procedural ones, which were negligible. In recent years, household surveys mounted in large metropolitan areas, at least, have seldom done much better than we did in Site II. Contact failure has become a general problem, apparently because the growing incidence of working wives lowers the effectiveness of daytime interview attempts. Suspicion of strangers and more stringent security precautions in multiple dwellings have also added to the problems of securing interviews.

of such gifts on response rates. Generally, it appears that while respondents value the gift, interview refusals are just as frequent as if no gift were offered. Noting that five years of such payments to landlords, tenants, and homeowners in the two experimental sites would accumulate to a total \$250,000, Rand and its subcontractors have agreed to eliminate them from future surveys. This decision may create some problems during the second wave in Site I, since those interviewed at baseline have reason to expect a second gift. Interviewers will be trained to respond diplomatically to questions on this subject.

We are, however, actively concerned with other steps to maintain rapport with our permanent panels of landlords, tenants, and homeowners. Our current judgment is that a combination of friendly preinterview and postinterview contacts is needed. Specifically, we think that providing respondents with a readable summary of selected findings from preceding survey cycles would help considerably to persuade them that their time was well spent. However, such a document would have to be designed with care, to avoid influencing their subsequent responses to certain questions repeated from earlier instruments.

Survey Data Preparation

Although the Supply Experiment's Survey Data Preparation Group (SDPG) has developed routines for handling all its anticipated tasks during the coming year, we do not expect these to be trouble-free. There are three kinds of problems.

One is simply maintaining quality. The work of this group requires sophisticated decisions and meticulous attention to detail day in and day out. Its professional managers supervise a large crew of part-time editors and coders whose morale is crucial to the quality of their work, yet who have little exposure to the larger problems and accomplishments of HASE.

Another is coordinating manpower resources with the workload. Each phase of the work on a given survey record depends on the completion of some prior phase, so that an unexpected disruption early in the sequence of operations sends ripples through the entire operation, idling some hands and overloading others.

A third is the sheer volume of the task. Beginning in January 1975, Rand will be receiving simultaneous shipments of survey records from two fieldwork subcontractors, operating in different sites with different survey instruments. The baseline survey in Site II will produce a volume of records approximately equal to that handled by SDPG during all of calendar 1974. For the second wave in Site I, the surveys are addressed only to a reduced sample of residential buildings, landlords, tenants, and homeowners—those permanently empaneled. The volume of survey materials from the second wave is expected to be roughly two-thirds of the baseline volume. In short, SDPG's workload will peak in 1975, at about 1.6 times its 1974 workload.

The challenge we face is to manage this workload so as to minimize the lag between completion of fieldwork and the availability to our analysts of clean files of survey records. We have yet to work out a detailed system of priorities, but we generally plan to concentrate first on the baseline surveys for Site II. (It seems more urgent to learn the fundamental facts about that housing market than to complete the second round of analyses for Site I.)

Data Systems

During the past six months, the Supply Experiment's Data Systems Group has concentrated mainly on two tasks: processing data related to sample selection for Site II, and developing a permanent record management system (RMS). The RMS is designed to produce survey field materials from sample lists, monitor field progress, and keep track of survey records returned from the field.

The baseline sample list for Site II will soon be selected, and the RMS is ready for operation. The group's attention now is shifting to the design of a postbaseline data management system. The mission here is to develop a system for storing and accessing survey data that can incorporate each year's increment of records, standardize their format, make appropriate links between records pertaining to the same property, and also link records compiled in different years for a given property, landlord, housing unit, or household.

Design work on this system has been twice postponed because of more urgent priorities. However, we think it will be ready well before there are clean files from second-wave surveys to be incorporated into it.

The other concern of the Data Systems Group is its ability to supply adequate programming support to HASE analysts. To better control the use of these resources, the Design and Analysis and Data Systems groups recently organized joint teams of analysts and programmers to plan and execute a coherent agenda of tabulations and analyses on each survey file. We hope by this means to avoid duplication of effort due to overlapping analytical interests, thus economizing on programming effort and computer runs.

Analysis and Reports

Because the Supply Experiment is a long-term project, as well as a large and complicated one, careful documentation of our work is essential. We cannot rely on individual memories and rough notes to recapture perishable information. Furthermore, we have found that errors and omissions in our research are often not discovered until the analyst is compelled to write down just what he has done and how he interprets the outcome. We have therefore given considerable time and attention to documentation, as the reader can confirm by perusing the list of working notes appended to this report.

To date, all HASE publications have been working notes, which are not meant for general distribution but primarily for rapid communication with HUD. We think that a number of these notes, suitably reviewed and edited, would be of general interest to the research community, as well as to those interested specifically in social experiments or housing policy. So far, we have not pressed for such publication (i.e., as official Rand reports) for two reasons. One is that until all major decisions about the experimental allowance program and the research design were made, such reports would rapidly become obsolete and therefore potentially misleading to a general audience. A second reason is simply the inexorable pressure of our agenda, which has left little time for updating and editing publishable materials.

However, Rand and HUD agree that it is time for general publication of HASE materials. There is a growing public awareness of the Supply Experiment, accompanied by a curiosity that can best be satisfied by a steady flow of research reports.

The first, naturally, would be design documents. But as our baseline data in each site are analyzed, we will also be able to report on them, as is indicated earlier in this section.

During the coming year, therefore, we expect to revise and consolidate a number of existing working notes into reports for general publication and to prepare new notes with such a transformation in mind.

PROSPECTS

Preparing this report has given those of us ordinarily preoccupied with the daily problems of the Supply Experiment a new sense of accomplishment and leaves us with considerable optimism about the future of this unique venture in policy research. So many tasks that seemed at the time endless, we note, have in fact been completed; so many negotiations that seemed at the time stalemated have in fact reached a workable conclusion; so many problems that seemed at the time unsolvable have in fact been solved.

It is particularly gratifying to us that Rand as an institution has proven flexible and resourceful enough to deal successfully not just with new research problems but with new kinds of research-related activity. Rand's prior institutional experience with housing-policy analysis did not include responsibility for housing program operations; nor did the organization have experience with large-scale survey research.

Building appropriate staffs for these activities and learning how to support their efforts was difficult for an institution whose traditional research tools, aside from its staff, are small offices (with closable doors) and excellent computers. The results have been fruitful for more than just the Supply Experiment, exposing Rand's policy analysts to new perspectives on the problems of program design and implementation and heightening their awareness that most data are created only by a long sequence of fallible operations.

As for those of us on the staff of the Supply Experiment, we look to the future with a confidence that is tempered by our painfully acquired understanding of the perversity of small events. Our confidence derives in part from our experience of difficulties overcome; but it derives even more from our sense that, as new problems arise, we can face them openly and jointly with HUD.

Appendix A

HOUSING ASSISTANCE SUPPLY EXPERIMENT WORKING NOTES

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.

- 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 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-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-8715-HUD, *Equity and Housing Objectives in Homeowner Assistance*, Ira S. Lowry, June 1974.
- WN-8819-HUD, *Index to the Site I Maps*, Doris Dong, August 1974.

Appendix B

CHRONOLOGY OF MAJOR EVENTS

- B-1. Housing Allowance Program, Site I
- B-2. Research Program, Site I
- B-3. Housing Allowance Program, Site II
- B-4. Research Program, Site II

Table B-1

CHRONOLOGY OF MAJOR EVENTS IN SITE I: HOUSING ALLOWANCE PROGRAM

Date	Event
	1972
18 December 22 December	<ul style="list-style-type: none"> • Rand appoints site manager for Brown County. • 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	<ul style="list-style-type: none"> • 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 15 May 4 June	<ul style="list-style-type: none"> • Rand opens a site office in Green Bay. • First meeting of the BCHA. • BCHA approves a memorandum of understanding with HUD concerning the purposes and organization of the experimental housing allowance program.
19 October	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • HAO Board of Trustees adopts bylaws, elects officers, and ratifies appointments of HAO director and deputy director.
24 December	<ul style="list-style-type: none"> • HAO acquires temporary quarters in Green Bay.
	1974
4 January	<ul style="list-style-type: none"> • Rand submits drafts of final sections of HAO Handbook to HUD.
18 February	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • BCHA approves allowance program standards promulgated by HUD.

14 March	<ul style="list-style-type: none"> • HUD and BCHA execute Annual Contributions Contract. BCHA and HAO execute agreement delegating program operations to the HAO.
29 March	<ul style="list-style-type: none"> • HAO tests enrollment and housing certification procedures with small number of invited applicants.
6 May 21 May 29 May	<ul style="list-style-type: none"> • HUD conducts HAO operational readiness review. • HUD approves HAO operating budget. • HUD and BCHA deliver first installment of ACC funds to HAO.
12 June	<ul style="list-style-type: none"> • HUD approves participation manual and form of participation agreements for renters and homeowners.
13 June	<ul style="list-style-type: none"> • HAO forms advisory committee of local officials and citizens. First meeting held.
17 June	<ul style="list-style-type: none"> • HUD completes first formal enrollment (signed participation agreement).
19 June	<ul style="list-style-type: none"> • HAO invites applications for enrollment from the general public and makes first payment to allowance recipient.
10 October	<ul style="list-style-type: none"> • HAO moves into permanent quarters.

Table B-2

CHRONOLOGY OF MAJOR EVENTS IN SITE I: RESEARCH PROGRAM

Date	Event
	1973
1 February 13 March 23 April	<ul style="list-style-type: none"> • Mathematica opens site office in Green Bay. • Rand completes plan for survey sample selection. • Mathematica commences tax-office search for parcel data required for sample selection.
6 August	<ul style="list-style-type: none"> • Rand releases screening survey sample list of residential properties to Mathematica.
26 August- 13 October 4 September- 19 October	<ul style="list-style-type: none"> • Mathematica conducts screening survey of occupants of 10,500 housing units. • Rand processes screening survey questionnaires and compiles master file for baseline sample selection.
16 October- 21 December	<ul style="list-style-type: none"> • Mathematica conducts baseline survey of residential buildings.

11 November- 18 December	<ul style="list-style-type: none"> • Rand releases baseline sample list to Mathematica in installments.
10 December- 31 March 1974	<ul style="list-style-type: none"> • Mathematica conducts baseline survey of landlords of 3,115 rental properties.
12 December- 30 April 1974	<ul style="list-style-type: none"> • Mathematica conducts baseline survey of 6,713 tenants and 1,429 homeowners.
27 December- 11 January 1974	<ul style="list-style-type: none"> • Mathematica conducts baseline windshield survey of 8,660 street segments in 108 neighborhoods.
1974	
31 January	<ul style="list-style-type: none"> • Rand releases baseline sample list of nonresidential properties to Mathematica.
3 March- 8 April	<ul style="list-style-type: none"> • Mathematica conducts baseline survey of owners of 378 nonresidential properties.
15 March	<ul style="list-style-type: none"> • Rand releases baseline sample list of seasonal properties to Mathematica.
3 April- 19 April	<ul style="list-style-type: none"> • Mathematica conducts baseline survey of owners of 250 seasonal properties.
15 June	<ul style="list-style-type: none"> • Mathematica completes baseline survey cleanup; closes site office.
1 July	<ul style="list-style-type: none"> • Mathematica delivers field record management materials to Rand.
20 August	<ul style="list-style-type: none"> • Rand completes accountability review on all major surveys.
16 September	<ul style="list-style-type: none"> • Rand completes coding, keypunching, and cleaning of 6,750 observation forms from the survey of residential buildings.
4 October	<ul style="list-style-type: none"> • Rand completes coding, keypunching, and cleaning of 2,116 landlord survey questionnaires.
14 October	<ul style="list-style-type: none"> • Rand completes coding, keypunching, and cleaning of 8,660 observation forms from the survey of neighborhoods.

Table B-3

CHRONOLOGY OF MAJOR EVENTS IN SITE II: HOUSING ALLOWANCE PROGRAM

Date in 1974	Event
28 January	<ul style="list-style-type: none"> • South Bend Common Council approves a memorandum of understanding with HUD concerning the purposes and organization of the housing allowance program.
8 April	<ul style="list-style-type: none"> • HUD designates St. Joseph County as an experimental site despite failure to secure participation of Mishawaka and the remainder of the county.
13 May	<ul style="list-style-type: none"> • Rand appoints site manager for St. Joseph County.
15 July	<ul style="list-style-type: none"> • Rand opens site office in South Bend.
25 July	<ul style="list-style-type: none"> • Housing Allowance Office (HAO) is incorporated as a nonprofit organization under the laws of the State of Indiana.
8 August	<ul style="list-style-type: none"> • First meeting of HAO Board of Trustees. Board adopts bylaws and elects officers.
14 August	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • HAO Board of Trustees appoints HAO director and deputy director.
6 September	<ul style="list-style-type: none"> • HUD and SBHA execute Annual Contributions Contract. SBHA and HAO execute agreement delegating program operations to the HAO.
27 September	<ul style="list-style-type: none"> • HUD approves operating budget for the HAO.
27 September	<ul style="list-style-type: none"> • First meeting of HAO Advisory Committee of public officials and citizens.
3 October	<ul style="list-style-type: none"> • HUD and SBHA deliver first installment of ACC funds to the HAO.
15 October	<ul style="list-style-type: none"> • Rand submits draft of HAO Handbook to HUD.

Table B-4

CHRONOLOGY OF MAJOR EVENTS IN SITE II: RESEARCH PROGRAM

Date in 1974	Event
30 January	<ul style="list-style-type: none"> • Rand completes preliminary design for sample selection and obtains list of tax parcels on magnetic tape.
1 May	<ul style="list-style-type: none"> • Rand commences tax-office search for parcel data required for sample selection.
16 May	<ul style="list-style-type: none"> • Westat opens site office in South Bend.
24 June- 9 August	<ul style="list-style-type: none"> • Rand releases screening survey sample list of residential properties to Westat in installments.
10 July- 6 September	<ul style="list-style-type: none"> • Westat conducts screening survey of occupants of 10,250 housing units.
23 July- 30 September	<ul style="list-style-type: none"> • Rand processes screening survey questionnaires and related forms, compiling a master file for baseline sample selection.
20 September	<ul style="list-style-type: none"> • Westat begins baseline windshield survey of 13,000 street segments in 86 neighborhoods.

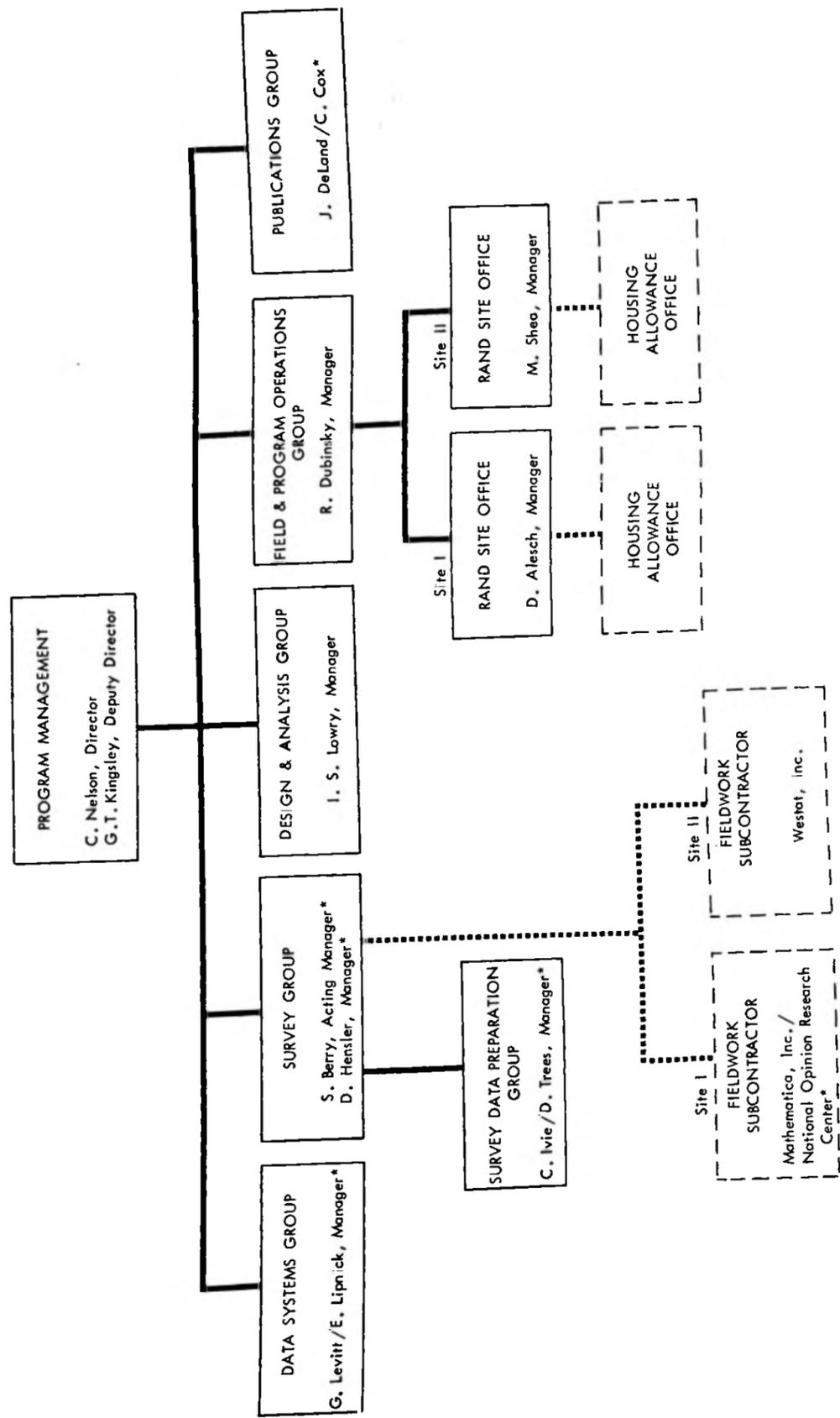
Appendix C

ORGANIZATION OF THE HOUSING ASSISTANCE SUPPLY EXPERIMENT

C-1. Rand's Project Organization for HASE

C-2. Organization of the Housing Allowance Office for Brown County

C-3. Organization of the Housing Allowance Office for South Bend



* Names given in order of incumbency.

Fig. C-1 — Rand's project organization for HASE

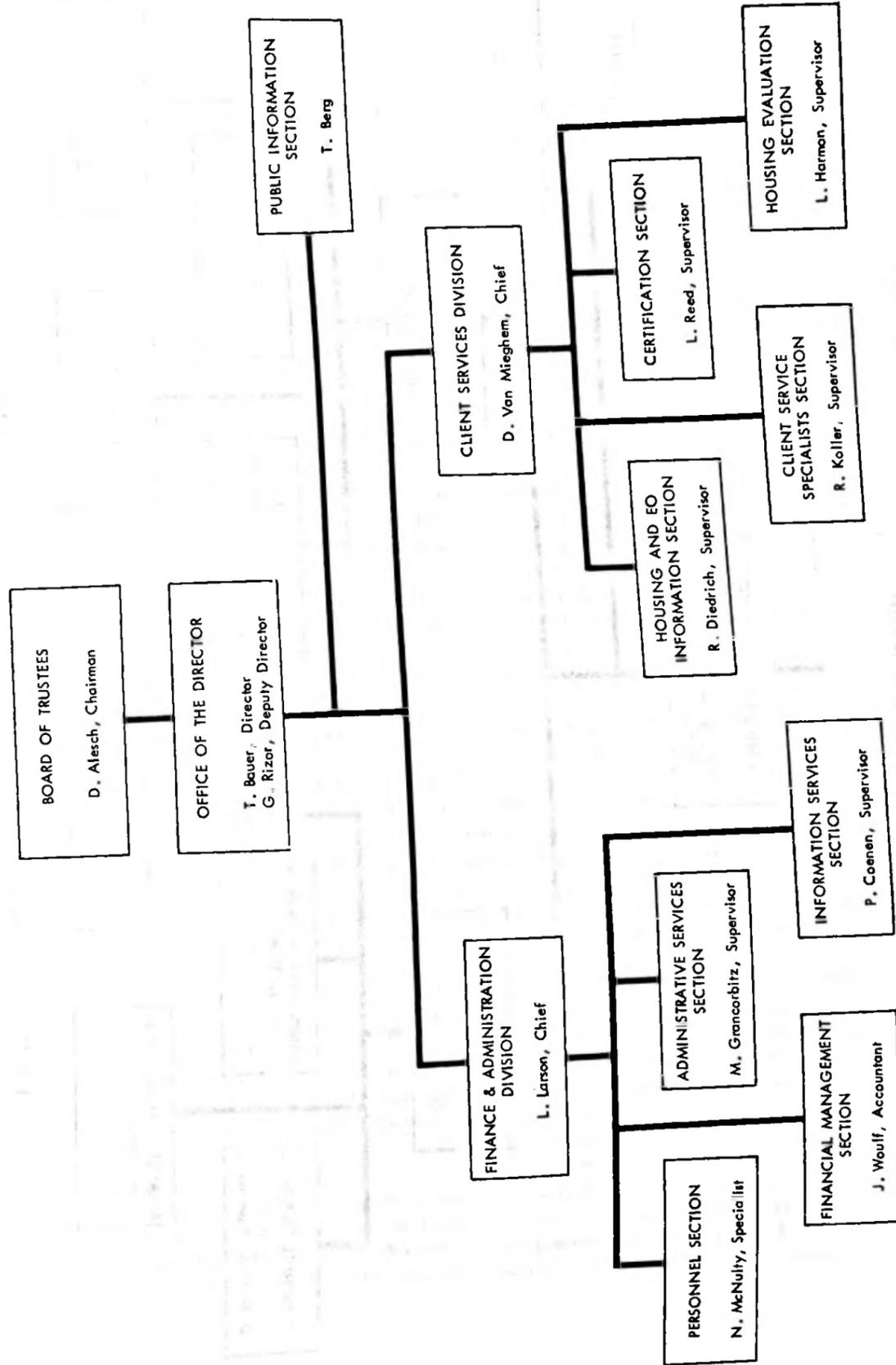


Fig. C-2 — Organization of the Housing Allowance Office for Brown County (Site I)

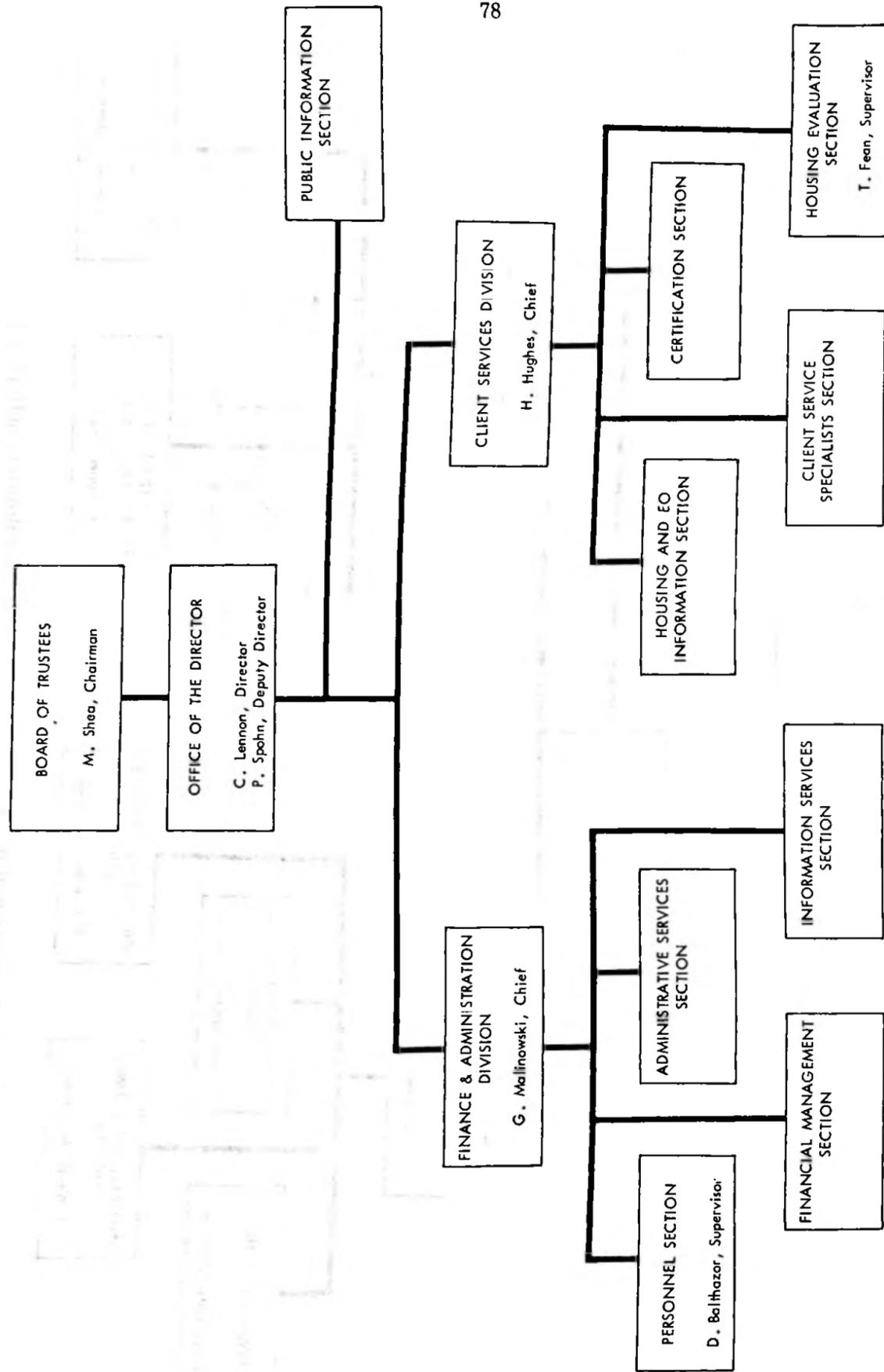


Fig. C-3—Organization of the Housing Allowance Office for South Bend (Site II)

Appendix D

RAND'S STAFF FOR THE HOUSING ASSISTANCE SUPPLY EXPERIMENT

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 persons. They were located in Rand's offices in Washington, D.C.; Santa Monica, California; Green Bay, Wisconsin; and South Bend, Indiana.

Slightly more than half of the staff were professionally rated employees or consultants, most of them working fulltime on the project. The remainder provided 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 since its inception in a way that indicates at least the main responsibilities or contributions of each member. Although staff turnover has been remarkably low, many individuals have joined the project, some have left, responsibilities and job titles have shifted over time, and new task groups have been organized to accommodate the project's changing agenda. It is therefore difficult to give as clear a picture as we would like of the contributions of each person.

Our work divides naturally into two phases, each of about eighteen months. Phase I, from April 1972 to September 1973, encompasses most of the work on experimental design and site selection. Phase II, from April 1973 to September 1974, entailed implementation of the experiment. While the two kinds of activities overlap in time (indeed, they are not always distinguishable), there was a major shift in work assignments during the summer and fall of 1973. We have therefore provided separate lists of the staffs for each phase, arbitrarily beginning Phase II in July 1973. The list for Phase II reflects not only a substantial increase in the project's staff during the latter part of 1973, but also a reorganization of responsibilities and job titles.

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, many individuals are listed in more than one place, reflecting concurrent or successive tasks. Fourth, the incumbents of a few key positions are listed in order of incumbency rather than alphabetically.

Many more persons than are listed here 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 major 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 1974 are named in Appendix C.

STAFF FOR PHASE I
(April 1972—June 1973)

PROGRAM MANAGEMENT

Program Director
Charles E. Nelson

Manager
Design and Analysis
Group
Ira S. Lowry

Manager
Field and Program
Operations Group
Robert Dubinsky

Manager
Data Systems Group
Gerald Levitt

Acting Manager
Survey Group
Sandra H. Berry

Manager
Editorial Group
Janet DeLand

SITE SELECTION

Screening
Annette Bonner
Therman Britt
Alan F. Greenwald
David B. Lewis
Richard B. Rainey
Albert H. Rosenthal
Michael Shanley

Field Reports
Therman Britt
Earl Carter
Robert Dubinsky
Alan F. Greenwald
Michael Shanley

HOUSING ALLOWANCE PROGRAM

General Analysis
Ira S. Lowry
Charles W. Noland
M. Mack Ott

Program Design
Alan F. Greenwald
David B. Lewis
Ira S. Lowry

Impact Estimates
Tiina Repnau
Barbara M. Woodfill

MONITORING PROGRAM

Sample Design and
Selection Procedures
Timothy M. Corcoran
Eugene C. Poggio
Tiina Repnau
Seymour Sudman

Survey Instruments
Robert P. Althausen
Sandra H. Berry
Therman Britt
Zahava Blum-Doering
William G. Grigsby
Deborah R. Hensler

Neighborhood Definition
Bryan Ellickson

Resident Observer
Robert Dubinsky
William G. Grigsby

ANALYSIS PLANS

Supply Response
David M. de Ferranti
Ira S. Lowry
Adele P. Massell
Charles W. Noland
M. Mack Ott
C. Peter Rydell

Residential Mobility
Robert P. Althausen
Zahava Blum-Doering
Harrison S. Campbell
Ira S. Lowry

Effects on Nonparticipants
Robert P. Althausen
Harrison S. Campbell
William G. Grigsby

Market Intermediaries
William G. Grigsby

DATA MANAGEMENT PLAN

Colleen M. Dodd
Misako C. Fujisaki
Gerald Levitt

FIELD SURVEY SUBCONTRACTOR

Mathematica, Inc.

Director
Urban Opinion Surveys
David Kershaw

Project Director
Mary Scowcroft

Instrument Development
Cheri Marshall
Michael Wills

STAFF FOR PHASE II
(July 1973--September 1974)

PROGRAM MANAGEMENT

Program Director
Charles E. Nelson

Deputy Director
G. Thomas Kingsley

Program Control
Antoinette Dickenson
Hal Moursund

FIELD AND PROGRAM OPERATIONS GROUP

Manager
Robert Dubinsky

Deputy Manager
Robert Tabor

Staff
Deborah R. Both
Earl Carter
Alan F. Greenwald
Hal Moursund
Michael F. Shea
Karen Goldfarb Watson

Consultants
Joel Achtenberg
Ralph Carey
Sylvia Correa
George R. Genung
William G. Grigsby
Frederick O'R. Hayes
Saul E. Jones
Aslan Palachi
Colin Walters

Subcontractors
Abt Associates
American Management Systems
Arthur Young & Company
Development Associates
Goldberg Marchesano & Associates
National Civil Service League

Site I Staff

Site Manager
Daniel J. Alesch

Site Monitor
Kirk Gray
Michael Shanley

Site II Staff

Site Manager
Michael F. Shea

Deputy Site Manager
Thomas Weeks

Site Monitor
Michael Shanley

Survey Monitor
Joyce Klimek

DESIGN AND ANALYSIS GROUP

Manager
Ira S. Lowry

Deputy Manager,
Planning and Coordination
Leonard G. Chesler

Administrative Assistant
Ellen Teed
Teresa E. Barrett

Experimental Design and Analysis Plans

Supply Response
A. Bradley Askin
C. Peter Rydell

Market Intermediaries
William G. Grigsby
Sammis B. White
Michael Shanley

Residential Mobility
Joseph Friedman
Kevin F. McCarthy

Community Attitudes
Phyllis Ellickson

Housing Allowance
Program

Charles W. Noland
Tiina Repnau
Barbara M. Woodfill[‡]

Survey Sample Design
and Selection

Timothy M. Corcoran*
Marsha A. Dade
William J. Granoff
Eugene C. Poggio*
Daniel A. Relles[†]
Tiina Repnau

Local Data Sources

Charles W. Noland[†]
Albert H. Rosenthal

Survey Audit and Analysis Teams

Screening Surveys

Marsha A. Dade
Larry A. Day
David M. de Ferranti*
William L. Dunn[†]
Joseph A. Grundfest
Tiina Repnau
Richard Stanton
Ann Wang
Barbara M. Woodfill

Surveys of Landlords

Therman Britt
Joseph Friedman
Barbara Horner
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

Timothy M. Corcoran*
Kevin F. McCarthy[†]

*Leader, Site I.

[†]Leader, Site II.

[‡]Leader, both sites.

SURVEY GROUP

Manager
Deborah R. Hensler

Assistant Manager,
Survey Operations
Zahava Blum-Doering

Assistant Manager,
Instrument Development
Sandra H. Berry

Instrument Production
Supervisor

Michele A. Arroyo
Nancy A. Hope

Administrative
Assistant
Marcia J. Lewis

Research Assistants
Patricia Ebener
Jennifer A. Hawes
Nancy A. Hope
Marcia J. Lewis

Instrument Design Consultant
Harold Sackman

Site I, Baseline Surveys

Mathematica, Inc.

Project Director
James Dixon

Site Manager
Peg Ban
David Crest

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

DATA SYSTEMS GROUP

Manager
Gerald Levitt
Edward H. Lipnick

Administrative Assistant
Jan L. Butler

Record Management System
Colleen M. Dodd*

Sample Selection
Sharon K. Anderson
David A. Beerman
Eugene Seals*
Edward B. Woo
Robert J. Young

Audit and Analysis
M. A. "Jean" Bedell
Joan C. Black
Colleen M. Dodd
Edward M. Fairbrother*
Richard W. Kellogg
Edward B. Woo

Systems Development
David A. Beerman
N. Donald Cohen
Edward M. Fairbrother
Misako C. Fujisaki*

*Leader.

SURVEY DATA PROCESSING GROUP

Manager
Carolyn Ivie
Donald P. Trees

Data Coding and Editing

Supervisor
Doris Crocker

Staff
Elizabeth Davidson
Janis Lenox
Greg Pitman
Carmen Wilson

Data Control and Computer Operations

Supervisor
Linda Winter

Staff
Janet Bandur
Janet Boothe
Christie S. Harslem
Michael J. Hunter
Caroline Insley
Lonna Prara Oliver

PUBLICATIONS GROUP

Managing Editor
Charlotte Cox

Cartography and Graphics
Doris Dong

