USER'S GUIDE TO HASE DATA, VOL. 1: OVERVIEW

E. WAYNE HANSEN
CHRISTINE D'ARC

R-2692/1-HUD
APRIL 1982

HOUSING ASSISTANCE SUPPLY EXPERIMENT

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

Rand
SANTA MONICA, CA. 90406

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PREFACE

This report provides the essential background for understanding and using the 40 research files compiled in the Housing Assistance Supply Experiment (HASE). The experiment, conducted by The Rand Corporation under contract to the U.S. Department of Housing and Urban Development (HUD), investigated whether direct cash allowances were a feasible way of helping low-income households maintain decent housing.

The eight program files contain client and administrative data collected over the period 1974-1979 from full-scale housing allowance programs mounted in Brown County, Wisconsin, and St. Joseph County, Indiana. Each program was administered by a Housing Allowance Office (HAO), a local nonprofit corporation established by Rand. The 32 survey files contain data collected in four annual cycles of field surveys conducted in each site to measure the program's effects on the local housing market and community. The surveys included interviews with the owners and occupants of a marketwide sample of properties, and field observations of their buildings and neighborhoods. All HASE files are accessible through the HUD-sponsored Housing Research Data Center, operated by Data Use and Access Laboratories (DUALabs) in Arlington, Virginia.[1]

This is the first of a three-part guide for analysts and programmers who wish to use the HASE data. The companion volumes offer specific guidance for using the survey files and program files, respectively.[2] The authors acknowledge the valuable assistance of Ann Wang and Patricia Boren with Secs. III and IV. Reviewers Allan Abrahamse and Suzanne Polich contributed useful suggestions for improving the first draft. This report was prepared pursuant to HUD Contract H-1789 and fulfills the requirements of Task 2.20 of that contract.

[1] See DUALabs Staff, Housing Research Data Center User Manual, Vol. 1: Data Center Services, March 1981.

[2] Patricia Boren, User's Guide to HASE Data, Vol. 2: The Survey Files, R-2692/2-HUD, forthcoming, and Ann W. Wang, User's Guide to HASE Data, Vol. 3: The Program Files, R-2692/3-HUD, forthcoming. Both are published by The Rand Corporation.

SUMMARY

The Housing Assistance Supply Experiment (HASE) was part of a Congress-mandated investigation into the desirability of direct cash allowances to help low-income households maintain decent housing. From 1974 through 1979, HASE supervised a housing allowance program in Brown County, Wisconsin, and St. Joseph County, Indiana, and studied the program's effects on the local housing market. The experiment yielded 40 research files: 8 program files contain administrative data gathered on client characteristics and program operations, and 32 survey files contain data from field surveys of the housing market. This report provides background for understanding and using the files.

THE EXPERIMENTAL SITES

Brown and St. Joseph counties were chosen as the experimental sites because both typified a large portion of the nation's metropolitan housing markets and because each was likely to respond very differently to the allowance program. Brown County (metropolitan Green Bay) represented markets with fast-growing urban centers (hence with tight housing) and without large racial minorities (hence with little housing segregation or discrimination). St. Joseph County (metropolitan South Bend) represented markets with deteriorating urban centers containing large, growing minority populations, surrounded by all-white suburbs with newer housing.

PROGRAM FILES

To administer the program, Rand established the housing allowance office (HAO), a nonprofit corporation, in each site. The HAO

- Screened applicants for program eligibility, enrolled eligible clients, and periodically verified their eligibility.
- Inspected clients' housing at enrollment and regularly thereafter. Clients could not receive allowance payments if their dwelling failed program standards.

- Disbursed monthly allowance payments. Each allowance equaled the difference between a standardized cost of adequate local housing and one-fourth of the client's adjusted gross income.

Four files per site capture information from those activities for every program applicant and client over the five-year experimental period. The client characteristics file records eligibility screening information on the client's household and finances, both at enrollment and at the client's last transaction before the end of the file period. The housing characteristics file documents the details and results of all inspections of the client's housing. The inspection covered building and unit features; considerations of habitability, safety, and decency; and repairs made the previous year. The recertification characteristics file contains information on changes in the client's household characteristics, finances, and allowances, as well as changes in HAO policies. To permit both detailed and cursory views of the client's entire experience in the program, the client history file combines all information from the other three files and adds a new record summarizing each client's program history.

Each file has a machine-readable dictionary giving the alphanumeric name, location, and length of every variable. Each file is documented by a codebook that defines and provides response distributions for the variables, and an audit report that assesses the completeness and reliability of the data.

SURVEY FILES

To monitor the program's effects on the local community, Rand conducted four annual cycles of field surveys in each site. The residential surveys were addressed to the HASE panel, a marketwide sample of about 2,000 residential properties in each site. To keep current with residential development, the panel was annually augmented with a sample of properties containing newly constructed residences. Other surveys gathered data on all neighborhoods in the county from

public records and field observations. The survey types are briefly defined below (the sample elements are underscored):

- Landlord survey--interviews with owners of sampled rental properties about property management and finances.
- Household survey--interviews with tenants and homeowners of housing units on sampled properties about their households, housing characteristics, and housing expenses.
- Residential building survey--observations of the physical characteristics, condition, and immediate environs of residential buildings on sampled properties.
- Neighborhood survey (two parts)--compilation of secondary-source data on the characteristics and facilities of each neighborhood in the county; observations of the features and condition of each street segment (both sides of a length of street between intersections) in the county.

The first or baseline wave of the surveys was conducted in 1974 in Brown County and 1975 in St. Joseph County, in each case just before the allowance program began enrolling clients. The subsequent waves were conducted annually for three years thereafter.

The survey cycles yielded 16 files per site: four each for the landlord, household, and residential building surveys (waves 1 through 4) and two each for the neighborhood surveys (waves 1 and 4). Each file contains one fixed-length record for every sample element in the survey type, site, and wave represented. A machine-readable dictionary gives the alphanumeric name, location, and length of each variable on the file. As with the program files, every survey file is documented by one or more codebooks and an audit report.

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ABBREVIATIONS

CCF--client characteristics file

CHF--client history file

DUALabs--Data Use and Access Laboratories

EHAP--Experimental Housing Allowance Program, of which HASE is a component; funded by U.S. Department of Housing and Urban Development

HAMISH--HASE Management of Information for the Survey of Housing, the computer-based record management system for the HASE survey files

HAO--Housing Allowance Office, a nonprofit corporation established by Rand in each experimental site to administer the allowance program

HASE--Housing Assistance Supply Experiment

HCF--housing characteristics file

HUD--U.S. Department of Housing and Urban Development

RCF--recertification characteristics file

Site I--Brown County, Wisconsin (metropolitan Green Bay)

Site II--St. Joseph County, Indiana (metropolitan South Bend)

SMSA--Standard Metropolitan Statistical Area

I. INTRODUCTION

The Housing Assistance Supply Experiment (HASE) was part of the Experimental Housing Allowance Program (EHAP), authorized by Congress and funded by the U.S. Department of Housing and Urban Development (HUD). EHAP was undertaken in 1971 to learn whether direct cash assistance to low-income households was a desirable way to help them secure decent housing; and if so, to help determine the best conditions for such assistance and the most appropriate methods for its administration.[1]

The Supply Experiment was intended to study market and community response to a full-scale housing allowance program--one that was open to nearly all low-income renters and homeowners. Under contract to HUD, Rand organized and supervised such a program in two north central housing markets, Brown County, Wisconsin (metropolitan Green Bay) and St. Joseph County, Indiana (metropolitan South Bend). The program, which began in 1974, was designed to continue for ten years, and to be monitored by HASE for the first five years.

To administer the program, Rand established a Housing Allowance Office (HAO), a nonprofit corporation, in each site. The HAO enrolled eligible applicants, periodically inspected their housing, and disbursed allowance payments. To monitor the program, Rand collected the HAO administrative records and compiled eight research files covering five years of program operation and client data.

To measure the effects of the program on the local housing market, Rand conducted 32 field surveys in four annual cycles in the experimental sites. The surveys included interviews with the owners and occupants of a marketwide sample of properties, and field observations of their buildings and neighborhoods. The survey data are organized in 32 research files.

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[1] For further details on EHAP and its component projects, see Ira S. Lowry, ed., Experimenting with Housing Allowances: Final Report of the Housing Assistance Supply Experiment, The Rand Corporation, R-2740-HUD, forthcoming, Sec. I.

The usefulness of the 40 HASE files goes far beyond the original purposes of monitoring the allowance program and its effects on the surrounding housing market. The data constitute a rich resource for cross-sectional and longitudinal studies of residential mobility, housing consumption patterns and policy, residential repair and rehabilitation, and government income-transfer programs. We are thus making the files available for wider use. To preserve analytic richness, we have altered the public-access versions of the files to the minimum extent necessary to protect the identities of program clients and survey respondents.

This volume, the first of a three-part guide, furnishes background for understanding the scope and contents of each file. Section II describes the experimental sites. Section III outlines the important features of the allowance program and its research files, and Sec. IV does the same for the surveys and survey files. Section V presents an annotated bibliography of HASE publications pertaining to the entire data base, so cross-references are kept to a minimum in the rest of the report.

The companion volumes provide detailed technical guidance for using the survey files (Vol. 2) and program files (Vol. 3). Together with user instructions from DUALabs, the three volumes in this guide will enable programmers and analysts to determine the applicability of the HASE data to their analyses and retrieve the information desired.

II. THE EXPERIMENTAL SITES

The experimental sites were chosen from all Standard Metropolitan Statistical Areas (SMSAs) in the nation to meet basic requirements of the experimental design and constraints on program funding.[1] Design considerations led us to search for self-contained, strongly contrasting housing markets that were likely to respond differently to the allowance program, yet were each typical of many metropolitan housing markets. Available program funding limited our choices to markets with 1970 populations of under 250,0000 persons (about 75,000 households).

After a multistage screening process, we chose Brown County (Site I) as representative of metropolitan housing markets with rapidly growing urban centers (hence with relatively tight housing markets) and without large groups of racial minorities (hence with minimal problems of residential segregation or housing discrimination). We chose St. Joseph County (Site II) as representative of metropolitan housing markets with declining urban centers that contain large, growing populations of blacks or other low-income minorities. Its deteriorating central city neighborhoods had an excess supply of older housing, whereas new housing was built mostly in surrounding all-white suburbs.[2]

Table 2.1 illustrates the contrasting characteristics of the two sites. Using data collected in our first survey cycle, conducted about the time the allowance program began, it shows that the sites continued to meet our selection criteria in mid-decade. Within our stated constraint regarding population size, the two counties differ remarkably in population growth and racial heterogeneity.

No sample of two, no matter how carefully chosen, can provide direct evidence about program effects or housing market dynamics in

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[1] Selection of the HASE sites is fully explained in Lowry, ed., Experimenting with Housing Allowances: Final Report of the Housing Assistance Supply Experiment, Sec. II.

[2] Brown County is an entire SMSA; St. Joseph County is part of the South Bend SMSA, which also includes Marshall County.

Table 2.1

CONTRASTING POPULATION CHARACTERISTICS OF THE HASE SITES

Site	Number of Persons	Average Annual Growth (%)		Households	
		1960-70	1970-74/5[a]	Number	Percent Black or Latin
Brown County	170,400	2.4	1.5	47,900	1.4
St. Joseph County	235,500	.3	-.8	75,600	10.4

SOURCE: Adapted from Ira S. Lowry, ed., *Experimenting with Housing Allowances: Final Report of the Housing Assistance Supply Experiment*, The Rand Corporation, R-2740-HUD, forthcoming, Table 2.1.

[a]The Brown County figure dates to 1974; that for St. Joseph County, 1975.

places not sampled. Generalization from the Supply Experiment therefore requires nonstatistical inference, mediated by analytic interpretation of the observed outcomes in the experimental sites.

III. THE ALLOWANCE PROGRAM AND PROGRAM FILES

To highlight whether responses to an allowance program would vary by site characteristics, we conducted identical programs in each site. A detailed procedural manual was developed jointly by Rand and HAO staff to state the common rules, administrative procedures, and record systems. In Brown County, the first site chosen, the program began enrolling applicants in June 1974; in St. Joseph County, enrollment began in December 1974.[1]

THE PROGRAM

Participation in the program was open to all low-income households residing in the sites, whether homeowners or renters. The amount of assistance offered was intended to enable an eligible household to afford decent, safe, and sanitary housing. Periodic market studies conducted by Rand provided estimates of the "standard cost of adequate housing" for various sizes of households in each site. Allowance payments filled the gap between that amount and one-fourth of the household's adjusted gross income, with the constraint that the amount of assistance could not exceed the participant's actual housing expenses.

A household was eligible for the program if it consisted of (a) one person, living alone or with nonrelatives, who was elderly (62 or older), handicapped, disabled, or displaced by public action[2] or (b) two or more related persons of any age, provided that the household

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[1] During the five-year monitoring period, the HAO board of trustees in each site included local community leaders and Rand staff members. At the end of the period, in 1979, the Rand board members were replaced by local residents to guide the program through its remaining five years. In the discussion of program principles below, we use the past tense to refer to the program during the monitoring phase.

[2] Beginning 1 August 1977, the program was opened to households of single persons younger than 62 who met other program requirements. However, older persons were to be given priority, and the younger single-person households could not total more than 10 percent of all recipients in the site.

did not already receive equivalent assistance under another federal housing program. The household's income and assets also had to fall within specified limits. The income limit was set by the assistance formula itself: when a household's adjusted gross income exceeded four times the standard cost of adequate housing for a household of its size, the allowance entitlement dropped to zero. The net asset limit was initially $20,000 ($32,500 for households headed by elderly persons); those amounts were later increased to offset general price inflation.[3]

In determining eligibility, the HAOs adjusted a household's gross income according to federal public housing program standards, with deductions for work-related expenses and for dependents and elderly persons. Transfer income (e.g., public assistance and social security) was included in gross income. The asset ceiling was set relatively high to include homeowners whose current incomes were low. However, gross income was calculated to include imputed income from home equity and other real property that did not yield a cash flow, so the allowance entitlement decreased for households with larger holdings of such assets.

Meeting the foregoing criteria on household size, income, and assets enabled a household to enroll in the program, but allowance payments did not automatically follow. The household's dwelling also had to meet minimum standards for space, domestic facilities, safety, and sanitation. A detailed housing inspection was conducted at enrollment, annually thereafter, and whenever the enrollee moved. Enrollees whose dwellings were inadequate could either arrange to repair them or move to adequate dwellings. There was no time limit for action, but allowance payments did not begin until adequate housing was obtained, and were suspended if a once-adequate dwelling fell below standard.

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[3] Beginning 1 July 1978, the net asset limit was adjusted annually to reflect changes in the consumer price index. As of 30 September 1979, the adjusted limit in Brown County was $25,300 ($41,000 for elderly households); in St. Joseph County, the corresponding figures were $27,000 and $43,800.

Participants had to find their own housing on the private market, negotiating terms and conditions of occupancy with the landlord or seller. They could change their tenure or place of residence within the boundaries of the experimental site without affecting their eligibility. A key feature of the program was that the amount of the allowance did not depend on actual housing expenditures.[4] Those who obtained adequate housing cheaply would have more cash left for other purposes; those who spent more on housing, whether by choice or because they were unable to locate a less expensive but adequate dwelling, would have less money for other things. The program thus provided participants with a strong incentive to economize on housing, paying no more than necessary to obtain a dwelling that (a) met program standards and (b) otherwise suited the household's preferences.

In short, allowances were only weakly earmarked for housing consumption. Once minimum standards were met, participants were neither penalized nor rewarded for additional housing consumption. That principle reflected our understanding of low-income housing problems: some low-income families spent little on housing and lived in substandard dwellings. Others lived in adequate dwellings but spent inordinate portions of their income for housing. The allowance plan was designed to ameliorate both circumstances.

In summary, the distinctive features of the allowance program were as follows:

- Assistance to both renters and homeowners.
- The use of income and assets, family size, and the local cost of decent housing as the main determinants of the need for assistance.
- Direct payments to program participants rather than to their landlords or mortgage holders.
- A housing-quality standard as the primary means of earmarking allowances.

[4] The constraint that allowance payments could not exceed the recipient's total housing expenses was rarely binding. Typically, the allowance amounted to about half of total housing expenses.

- Portability of allowances within the experimental sites.
- Reliance on participant initiative and normal market processes to achieve program goals.

ROLE OF THE PROGRAM IN THE EXPERIMENT

The Supply Experiment was originally intended to assess the allowance program's effects on the local housing market, not the program itself. Therefore, issues of program management and participant behavior fit into our analysis plans only to the extent necessary to measure the program's stimulus on the housing market.

In 1978, however, a mid-experimental review suggested that the long-term, marketwide data being collected by HASE offered special opportunities for examining the allowance program in its housing market context--an inquiry to which the other EHAP projects were not suited. Accordingly, two new topics were added to the HASE research charter:

- The dynamics of program eligibility and participation. What are the characteristics of households in the general population that are eligible to enroll? Given those characteristics, what are the long-term trends in program enrollment, participation, and termination? What would be the steady-state program size and composition in a continuing allowance program?
- The program's effects on participants. Given the specific housing market, how does participation in the program affect recipients' decisions to seek better quarters or improve their current dwellings? How does an augmented budget affect homeowner participants? Do landlords respond differently when their tenants become program participants? What are the long-term trends of these and related effects?[5]

[5] Further background for this change is given in Lowry, ed., Experimenting with Housing Allowances: Final Report of the Housing Assistance Supply Experiment, Sec. I. The main questions in the original HASE research charter are summarized in Sec. IV, below.

With these additions, the program files, which had formerly filled a supporting role in HASE analyses, assumed a leading role.

THE PROGRAM FILES

The program files were compiled from data collected on various HAO administrative forms. Some of the data were gathered to meet HASE research needs; most served HAO administrative needs in monitoring the flow of clients through the program, maintaining records of individual allowance payments, and documenting individual housing evaluations. The HAO entered the completed forms into its automated system and periodically sent the resulting administrative data files to Rand. We recompiled them into four cumulative program files for each site: a client characteristics file (CCF), a housing characteristics file (HCF), a recertification characteristics file (RCF), and a client history file (CHF). Each file is documented by a codebook that defines and provides response distributions for every variable, and an audit report that assesses the completeness and reliability of the data.[6]

At every stage in the process of transforming the original administrative files into program files, we ran computerized checks to detect errors. Analytically important data were checked for adherence to specified response ranges, logical consistency within a client record, and identifier consistency across records for the same client. All discrepancies were investigated, many with the help of the HAO. As appropriate, the suspect values were corrected, confirmed without

[6] Codebooks and audit reports are individually listed under "Program File Documentation" in Sec. V. The client history files for both sites are documented in a report that is part codebook, audit report, and user's guide: Charles A. Hubay and Casey Cantrell, The HAO Client History File, The Rand Corporation, N-1711-HUD, forthcoming. In most program file documents, the program files are called "analysis files" to distinguish them from the raw administrative data files received from the HAO. When the HASE data base is viewed as a whole, as in this guide, the important distinction is of course between program and survey data.

change, or (if unresolvable and clearly wrong) replaced with an audit code signifying missing or unusable data.

The program files contain a record for every applicant and client through the first five years of HAO operations, covering the periods 17 June 1974 through 30 June 1979 for Brown County (Site I) and 17 December 1974 through 4 January 1980 for St. Joseph County (Site II). Table 3.1 indicates the number of records in each file and the types of clients represented.

Table 3.1

CLIENT GROUPS REPRESENTED IN THE PROGRAM FILES

File	Group	Number of Records	
		Site I	Site II
CCF	Applicants	16,670	34,657
	Applicants interviewed for eligibility	11,802	23,017
	Clients ever enrolled	9,133	16,126
	Clients enrolled at end of year 5	4,136	7,367
HCF	Clients ever enrolled	9,133	16,126
RCF	Clients ever enrolled	9,133	16,126
CHF	Applicants	16,670	34,657

SOURCE: Compiled by HASE staff from all program file documentation (see Sec. V).

File Contents

Details of file contents are given in Tables 3.2 through 3.5; a general idea of the information is conveyed by a brief review of a client's course through the program. Each applicant was screened for program eligibility on the basis of his application form and enrollment interview. The screening information appears in the client characteristics file, along with updated information and enrollment status as of the five-year period's close (see Table 3.2).

Table 3.2

CONTENTS OF THE CLIENT CHARACTERISTICS FILE

Topic	Information Recorded
1. Client identification	Client ID, previous client ID, housing unit ID at close of file. Neighborhood code and census tract of housing unit at preliminary application, enrollment, and close of file.
2. Eligibility and participation	Dates and circumstances of preliminary application, enrollment interview, and most recent client recertification and housing unit reevaluation. Dates and reasons for enrollment, termination, and reinstatement. Number of housing evaluation requests and number of acceptable housing units.
3. Household characteristics	Total household size, number of eligible household members at preliminary application, enrollment, and last recertification or close of file. For each household member: age, sex, race, and relationship to head of household. Family structure, life-cycle stage, assets including value of house, income, and occupation.
4. Housing characteristics and expenses	Tenure at preliminary application, enrollment, and close of file; whether unit is owned, rented, federally subsidized; date of lease and move-in date; monthly expenses for rent, mortgage, interest, utilities, taxes, insurance and maintenance for residences at enrollment and close of file; physical characteristics of dwelling; nonresidential uses of property.
5. Allowance payments	Date payments authorized, maximum entitlement, number of authorizations, amount of last monthly payment, total gross and advance payments, date of last payment change, current annual cost of housing.

SOURCE: Adapted from Ann W. Wang, *Codebook for the HAO Client Characteristics File, Site I, Year 5*, The Rand Corporation, N-1417-HUD, October 1980, p. 4.

NOTE: The client characteristics file contains 665 variables per record.

Table 3.3

CONTENTS OF THE HOUSING CHARACTERISTICS FILE

Topic	Information Recorded
1. Evaluation information	For each evaluation: presence of administrative forms, completion status, previous action, form serial number, request date, number and date of contacts and appointments, evaluation date, evaluation type and reason (payment authorization annual reevaluation, correction, update, etc.). Dates for HAO action on evaluation, unit certification, special reevaluation for paint deficiency, and payment authorization. Number of evaluations per client.
2. Housing unit identification	Unit ID, neighborhood and census tract, occupancy status, lease date for rental unit.
3. Building and unit characteristics	Building type and description: number of residential units, levels, basements, porches, commercial or industrial units; siding and roofing materials, roof type, garage spaces, other buildings on property, location of evaluated unit in the building, type of access, ratings for building exterior and interior, presence of flaking or peeling paint; total number of rooms in unit, habitable rooms and bedrooms, presence of bath and kitchen facilities, bath and kitchen adequacy, maximum occupancy.
4. Repair data	Unit improvements since the last evaluation: item repaired, type and location of repair, who did it, who paid for it, cost of individual repairs, and total cost.
5. Evaluation results	Habitability rating, summary condition rating, special review determination, adequacy of space for occupants, evaluation finding, overall acceptability.
6. Client characteristics	All variables from the client characteristics file (see Table 3.2), plus tenure at the time of evaluation and payment authorization, whether client is receiving payments at close of file; monthly housing expenses: rent, utilities, mortgage interest, real estate taxes, insurance, maintenance, and other housing expenses.

SOURCE: Adapted from Ann W. Wang, *Codebook for the HAO Housing Characteristics File, Site I, Year 5*, The Rand Corporation, N-1419-HUD, February 1981, p. 3.

NOTE: The housing characteristics file contains 8,191 variables per record.

Table 3.4

CONTENTS OF THE RECERTIFICATION CHARACTERISTICS FILE

Topic	Information Recorded
1. Interview information	Length of interview, transaction type, recertification type, date of interview, signature date, processing date, effective date of information.
2. Housing characteristics	Neighborhood and census tract, unit type, uses of property, appliances and furniture provided, mortgage status, full rent or not, utilities paid for.
3. Household characteristics	Eligibility status, total size of household, family structure, life-cycle stage, tenure, move-in date, assets including home value, income, allowance entitlement.
4. Housing expenses	Rent, utilities, interest, taxes, insurance, maintenance, total housing expenses, mortgage principal and interest.
5. Client characteristics	Summary of information from the client characteristics file (see Table 3.2).

SOURCE: Adapted from Ann W. Wang, *Codebook for the HAO Recertification Characteristics File, Site I, Year 5*, The Rand Corporation, N-1421-HUD, March 1981, p. 3.

NOTE: The recertification characteristics file contains 5,466 variables per record.

Table 3.5

CONTENTS OF THE CLIENT HISTORY FILE

Topic	Information Recorded
1. Digital client history	Chronological summary of every transaction pertaining to each client while in the program. Location of supporting detail elsewhere in the file. Indicators for linking each client with others of similar characteristics to form analytic subsamples.
2. Client characteristics	(Table 3.2)
3. Housing characteristics	(Table 3.3, topics 1-5)
4. Recertification characteristics	(Table 3.4, topics 1-4)
5. Payment suspensions and reauthorizations	Circumstances and timing of allowance suspensions and subsequent reauthorizations.
6. Exceptional payment adjustments	Circumstances and timing of allowance adjustments not covered by normal HAO computer algorithms.

SOURCE: Charles A. Hubay and Clairessa Cantrell, *The HAO Client History File*, The Rand Corporation, N-1711-HUD, forthcoming.

NOTE: The number of variables per record differs with the extent of the client's program participation.

If an applicant was found eligible, his dwelling was evaluated according to program standards. If the dwelling failed to meet the standards, the client could repair it or move to better quarters. In either case, he had to request another housing evaluation for the new or repaired dwelling. If the dwelling passed the evaluation, allowance payments were authorized. All housing evaluations are recorded in the housing characteristics file (see Table 3.3). It covers the initial evaluation of the client's dwelling at enrollment, inspections of other dwellings the client considered occupying or had moved into, reevaluations of repaired dwellings, and annual housing recertification evaluations.

For a client to remain in the program, both his household and dwelling had to continue to meet HAO standards and eligibility requirements. Any changes in household characteristics affecting eligibility or the amount of the allowance payment were recorded either as they became known or during the annual recertification process. Such changes, other corrections or revisions of the client's records, and changes of HAO policy (as in allowance payment schedules) appear in the recertification characteristics file (see Table 3.4).

To allow for both detailed and cursory views of the entire process, the client history file combines all information from the other three files[7] into a single comprehensive dossier for each client, and adds a new record summarizing the client's program history (see Table 3.5).

In addition to variables obtained directly from the HAO administrative records, the program files contain a number of derived variables, most of them analytically useful aggregations of original variables. For example, the derived variable CZPASS gives the number of different dwellings that were found acceptable for each client.

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[7] The client history file also contains a few specialized variables from HAO administrative files that do not appear in the other program files. Because the CHF's size and complexity make it somewhat cumbersome to use, the individual client, housing, and recertification characteristics files were retained to facilitate data processing for analysis designs that do not require the full range of client data.

File Structure

In all four program files each logical record pertains to a specific client. Records in the client, housing, and recertification characteristics files are of fixed length, though the amount of data per HCF and RCF record depends on the number of the client's housing and recertification transactions, respectively. In the client history file, each logical record may contain many physical records of different lengths and types.

Each file has a machine-readable dictionary that gives the alphanumeric name, location, and length of every variable on the file.[8]

[8] For more details on file structure, see DUALabs Staff, Housing Research Data Center User Manual, Vol. 3: Primer of On-Line Access Procedures, DUALabs, June 1981.

IV. THE HASE SURVEYS AND SURVEY FILES

This section discusses the role of the surveys in the HASE research charter, defines the survey samples, reviews survey administration, and describes the contents of the survey files.

ROLE OF SURVEYS IN THE EXPERIMENT

As noted in Sec. III, the research goal motivating the experiment was to determine how the allowance program affected the local housing market and how the market subsequently responded. Specifically, the following clusters of questions were addressed:

- 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 combination of price increases and housing improvements will result? How long will those responses take to reach a steady state and how will they 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?
- 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 decision to move or stay? What types of neighborhoods will the movers seek and succeed in entering? Will moves by allowance recipients set in motion a chain of moves by nonrecipients?

- Effects on nonparticipants. How will households not receiving housing allowances be affected by the program--particularly those whose incomes are within or just above the limits of eligibility? Specifically, will the increased housing demands of allowance recipients raise housing costs for nonparticipants? Whether or not such increases occur, will nonparticipants perceive personal hardships or benefits from the program? How will they perceive and react to allowance-stimulated neighborhood changes?

Although program data would be relevant to some of those questions, most of the answers were expected to come from surveying the local housing markets. Accordingly, Rand conducted 32 field surveys in four annual cycles from 1974 to 1978 in Brown County and from 1975 to 1979 in St. Joseph County.[1] The residential surveys were directed to the HASE panel, a marketwide sample of properties in each site. Annual interviews were conducted with the owners and occupants of each property; less frequent field observations were made of the residential buildings associated with each property. Other surveys gathered data on all neighborhoods in the county from public records and field observations.[2] Each survey type is briefly defined below, with the sample element underscored:

[1] Although we initially contemplated six annual survey cycles in each site, we terminated the surveys after the fourth cycle on the grounds that additional cycles would not yield enough new information to warrant the cost. In Brown County, Mathematica, Inc. conducted the first survey wave as subcontractor to Rand; the National Opinion Research Center (NORC) conducted waves 2 through 4. In St. Joseph County, all waves were conducted by Westat, Inc.

[2] When the research charter was expanded to include the allowance program itself (see Sec. III), we added two brief surveys to the agenda. One was a survey of clients in both sites who enrolled in the program but terminated without ever receiving allowance payments; the other was a survey of client landlords in Site II. We also conducted an informal survey of market intermediaries and indirect suppliers in each site, but no machine-readable files were produced. See "Survey Design," in Sec. V, for documentation of these additional surveys.

- Landlord survey--interviews with owners of sampled rental properties about property management and finances.
- Household survey[3]--interviews with tenants and homeowners of housing units on sampled properties about their households, housing characteristics, and housing expenses.
- Residential building survey--observations of physical characteristics, condition, and immediate environs of residential buildings on sampled properties.
- Neighborhood survey (two parts)--compilation of secondary-source data on characteristics and facilities of each neighborhood in the county; observations of features and condition of each street segment (both sides of a length of street between intersections) in the county.

Figure 4.1 portrays the relation between the residential survey types, respondents, and sample elements. Properties were the key sample elements: no housing unit or building was surveyed unless associated with a sampled property.

SURVEY SAMPLE

Sample Design

The HASE panel was a marketwide probability sample of about 2,000 residential properties in each site. In choosing the panel, we were guided by four general considerations, implied in the HASE experimental design:

1. We wanted to be able to generalize from survey results to events in the local housing market as a whole. Therefore, we wanted a sample representative of all sectors of the market, each sample element having a known probability of selection.
2. We anticipated that different sectors of the market would be affected differently by the allowance program and would show

[3] The household survey was originally called "survey of tenants and homeowners," a term preserved in much of the survey's file documentation.

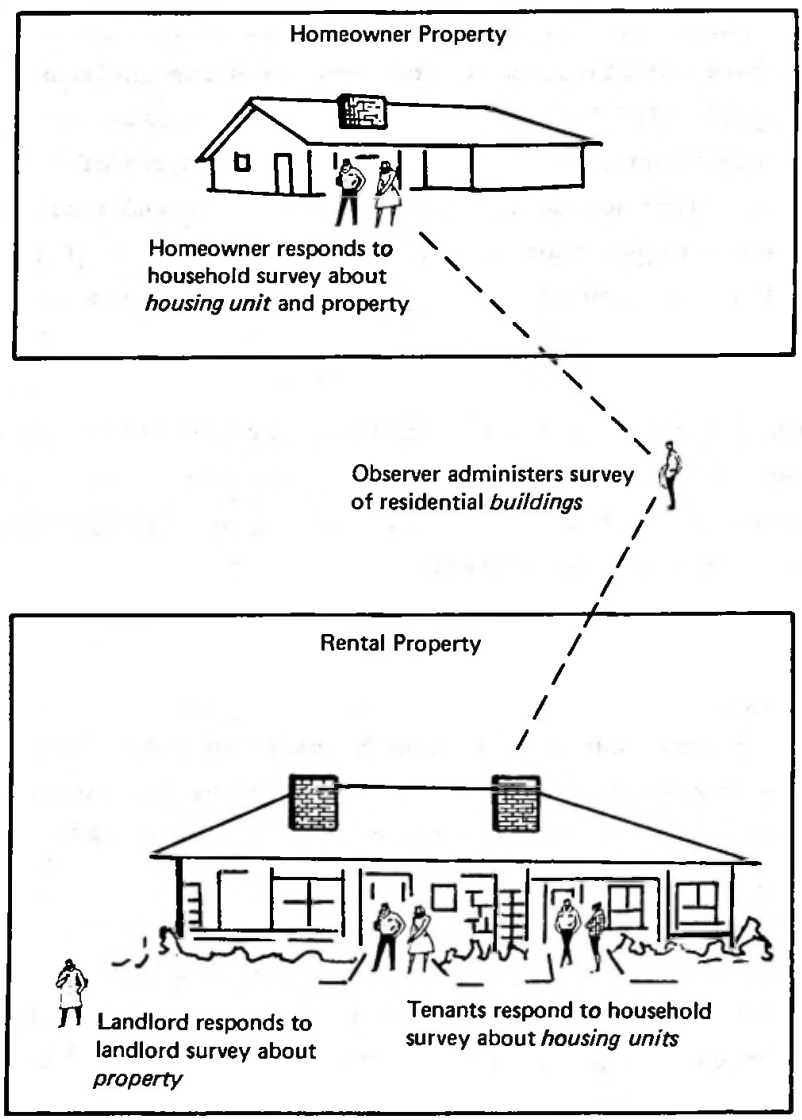

Fig. 4.1 — Relation between respondents and *sample elements* in HASE residential surveys

different patterns of response to the HASE surveys. We wanted to be sure that each sector of interest was well enough represented that we could generalize about its particular response.

3. We wanted our generalizations to be especially reliable for sectors in which the allowance program had large effects. To the extent that we could identify those sectors ahead of time, we wanted to concentrate survey resources on them.
4. Although it would be difficult at best to generalize about the effects of an allowance program on housing markets outside our two experimental sites, the transferability of our findings would be improved if we could disaggregate them by sector. We wanted to define the sectors in our markets so that we could identify corresponding sectors elsewhere, especially those that might be unimportant in our sites but prominent elsewhere.

The sample design also reflected our judgment that the key parameter to be estimated from the survey data was the mean price elasticity of the supply of housing services. We expected the value of that parameter to vary both by market sector and over time. Our sample design therefore focused survey resources on the sectors of the housing market most likely to be affected by the allowance program, thus assuring that estimates made for the high-impact sectors would be sufficiently precise. The design also called for enough resources to be diffused over the low-impact sectors to detect unexpected levels of activity there. Our approach may be called a modified impact-gradient sampling plan, entailing sample stratification that permitted us to "oversample" high-impact residential properties and "undersample" others.

The basic sample element was the property, the smallest unit of real estate for which an owner maintained a separate account.[4] The

[4] The HASE property is generally synonymous with the residential tax parcel defined by the county tax assessor's office. It is a lot containing at least one residential structure (single-family home, duplex, multiunit dwelling) or a structure of mixed use. In rural areas properties tended to be much larger, with only scattered improvements, e.g., an 80-acre farm with a house and outbuildings.

sampling frame consisted of all residential tax parcels in each county. From it we chose a stratified probability sample, surveyed those properties before the allowance program opened (survey wave 1 or baseline), then selected the HASE panel from survey records with complete baseline data. Panel properties were to be resurveyed annually over the course of the experiment.

Our interest in nonresidential properties was limited to those that might become residential during the four-year survey period. To test whether there were any "hidden" residential conversions among properties designated nonresidential in the county tax assessor's records, we randomly chose a few such properties and administered a brief survey to their owners at baseline. The results confirmed the nonresidential use of those properties. It was impractical to sample the extensive areas of unimproved land in both sites; a large sample would be needed to obtain even a small number of properties likely to be developed later. Instead, we decided to keep current with residential development by augmenting the panel annually with a sample of properties chosen from those for which residential building permits had been issued.

The classical problem with longitudinal panels is attrition, or loss of sample elements over time. Our sample elements were properties, parcels of land that are never physically lost. They can be subdivided, combined, and converted to a different tenure or to nonresidential use, but those were phenomena we wanted to observe. After the HASE panel was selected, attrition was generally limited to cases for which we were unable to complete an annual interview with both the property's owner and some of its tenants.

Sample Selection

Eighteen sampling strata were chosen to represent the various sectors of the local housing market. As shown below, the strata distinguished properties by location (urban or rural), tenure (rental or ownership), size (number of housing units), and rent or estimated market value (tercile or quartile of the countywide distribution).

	Urban Rental		
	Lower tercile:		
1	Single-family		Urban Owner
2	2-4 units	12	Lowest quartile
3	5+ units	13	Second quartile
	Middle tercile:	14	Upper two quartiles
4	Single-family		
5	2-4 units		Rural Owner
6	5+ units	15	Lower two quartiles
	Upper tercile:	16	Upper two quartiles
7	Single-family		
8	2-4 units		Specialized Housing
9	5+ units	17	Rooming houses
		18	Mobile homes
	Rural Rental		
10	Lower two terciles		
11	Upper tercile		

For each stratum we set explicit sampling targets for the baseline HASE panel. To determine the targets, we first estimated the number and types of properties needed for longitudinal analysis at the end of the experiment. Such analyses would require properties for which complete data had been collected in the four survey waves. Working back, estimating rates of survey nonresponse and conversion to nonresidential use in each of the four waves, we progressively inflated the initial estimates to arrive at the stratum-specific sampling targets.

We selected the baseline panel in several phases. Our goal was to limit the data-collection effort for properties that did not end up in the panel without unduly compromising probability sampling methods.

Sampling Frame to Screening Sample. First, we classified all properties in the county tax assessor's records as urban or rural and residential or nonresidential. All residential properties were further stratified by tenure, number of units, and average assessed value per unit (a temporary proxy for both value and rent). Then we

randomly sampled those strata, selecting roughly twice the number of properties needed for the panel. They formed the sample for the screening survey, in which fieldworkers visited each property and briefly interviewed the residents to verify tenure, number of units, and rent.

Baseline Sample. Using the new information from the screening survey, we restratified the sample into the 18 sampling strata. From the restratified screening sample, we randomly selected the baseline sample of properties to be scheduled for detailed field observations and lengthy interviews with the owners and occupants. The baseline landlord, household, and residential building surveys were administered to each of those properties.

Baseline HASE Panel. In the last phase, we restratified the baseline sample, using baseline survey data, then prepared to select the panel from properties with field-complete records representing completed interviews and observations. For a homeowner property, that meant a field-complete record from the household survey; for a rental property, a field-complete record from the landlord survey, and either a vacancy report or a record representing a completed tenant interview from the household survey. Though seemingly rigid, those criteria were essential to our research design; complete baseline data are needed for longitudinal analysis.

When those selection criteria were applied, the panel-eligible pool shrank substantially, primarily because of respondent refusals to be interviewed. In Site I, the panel missed the target sample sizes in 10 of the 18 strata; most serious was the 28 percent shortfall for single-family rental houses.[5] In Site II, the initial panel fell so far short of the sample targets that the record-completion criteria had to be relaxed. Even then, admitting properties with incomplete survey data, the final panel missed the target for low-rent, single-family houses by 47 percent.[6] Nevertheless, the panels in

[5] See Timothy M. Corcoran, Selecting the Permanent Panel of Residential Properties, Site I, The Rand Corporation, N-1107-HUD, April 1981 (first issued as WN-9575-HUD, April 1978).

[6] See Timothy M. Corcoran, Selecting the Permanent Panel for Residential Properties: Site II, The Rand Corporation, N-1109-HUD, April 1981 (first issued as WN-9577-HUD, April 1977).

both sites provide sufficient representation in all strata to meet most analysis designs. We compensated for the nonresponse biases introduced through panel selection by means of a complex weighting scheme.

Once chosen, the properties on the HASE panel governed the choice of other sample elements. A panel of housing units on panel properties was designated for the household survey. Generally, all units on properties containing fewer than five units were empaneled; on larger properties, a sample of units was empaneled.[7] Except for a few very large properties in Site II, all buildings on empaneled properties were scheduled for observation in the residential building survey.[8]

Panel Augmentation. To monitor residential development in the local housing market, we annually surveyed a sample of properties representing new residential construction. At each postbaseline wave, the new-construction sample was chosen from all properties for which building permits were issued in the county two years earlier. After fieldwork in the wave was completed, a portion of the sample (preferably properties with complete survey data) was added to the HASE panel, which was then designated that wave's panel. In addition,

[7] For properties containing 5 or more units, we empaneled 4 units in Site I and the following numbers of units in Site II:

Units on Property	Units Empaneled
5-25	4
26-50	6
51-400	12
401+	24

In both sites, the primary empanelment criterion for a housing unit was completion of a baseline household survey. If the number of units meeting the criterion did not fill the quota for a property, the criterion was progressively relaxed to include units with partially complete surveys, vacant units, units with incomplete surveys, and (for Site II only) units not in the baseline sample.

[8] In Site II, all buildings on properties with less than five residential buildings were surveyed. On properties with five or more buildings, only those containing sampled units were surveyed.

a sample of properties containing federally subsidized housing was added at wave 3 in Site I, and a sample of residential hotel properties was added at wave 2 in Site II. Unlike the new-construction samples, the latter samples were empaneled before, not after, fieldwork.[9] Once empaneled, augmentation sample properties remained to be surveyed in all subsequent waves.

Figures 4.2 and 4.3 summarize the entire process of panel selection and augmentation in the two sites. As the diagrams show, the survey sample at each postbaseline wave consisted of the prior-wave panel plus the current-wave new-construction sample.[10] The shading pattern indicates the timing of empanelment, and thus shows when properties entered the longitudinal sample.

SURVEY ADMINISTRATION

The surveys of landlords and households were conducted annually. We originally planned annual surveys of residential buildings and neighborhoods as well, but later concluded that changes would be too slow to warrant annual data collection, so we restricted those surveys to baseline and wave 4.[11]

Baseline surveys were conducted in 1974 in Brown County and 1975 in St. Joseph County, in each case just before the allowance program began enrolling clients. Because of that intersite difference in the start of the program, survey waves in St. Joseph County lagged one

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[9] The subsidized housing and residential hotel samples were added to compensate for housing types overlooked in or excluded from the initial sample design for the site. Further details on all augmentation samples are in E. Wayne Hansen and Marsha E. Baran, Augmenting the HASE Panel of Residential Properties, Site I, The Rand Corporation, N-1448-HUD, forthcoming; and E. Wayne Hansen and Patricia Boren, Augmenting the HASE Panel of Residential Properties, Site II, The Rand Corporation, N-1614-HUD, forthcoming.

[10] Except at Site II, wave 2, when fielding problems prevented surveying the wave 2 new-construction sample until wave 3.

[11] For the survey of residential buildings, this conclusion was reached after the Site I, wave 2 survey revealed negligible changes since baseline. In Site I, wave 3, and Site II, waves 2 and 3, the survey of residential buildings was addressed only to the buildings on panel augmentation sample properties.

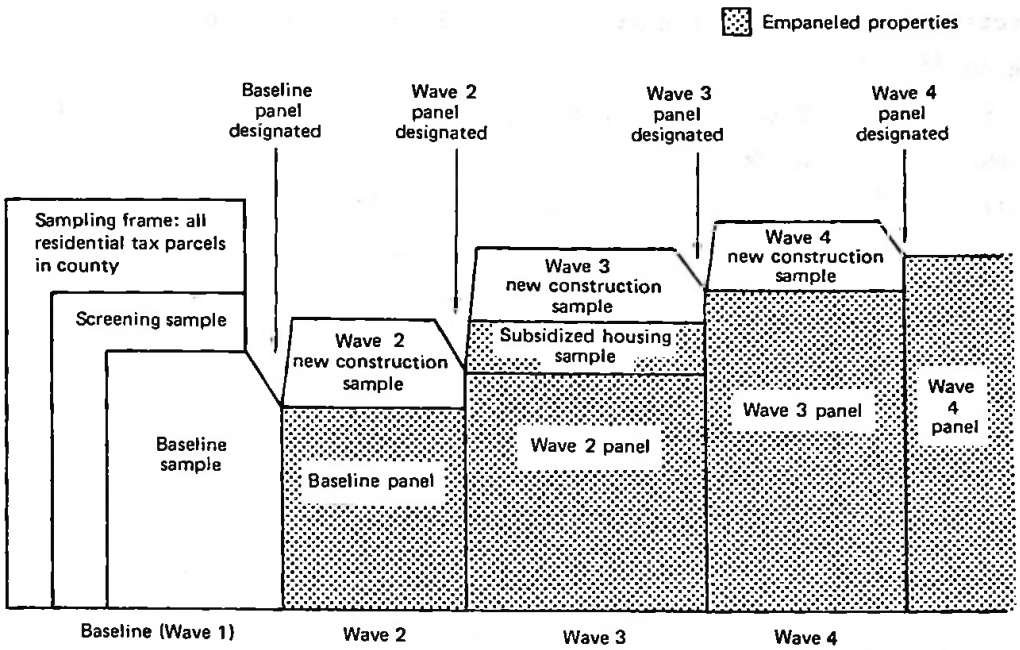

Fig. 4.2 —Panel selection and augmentation, Site I

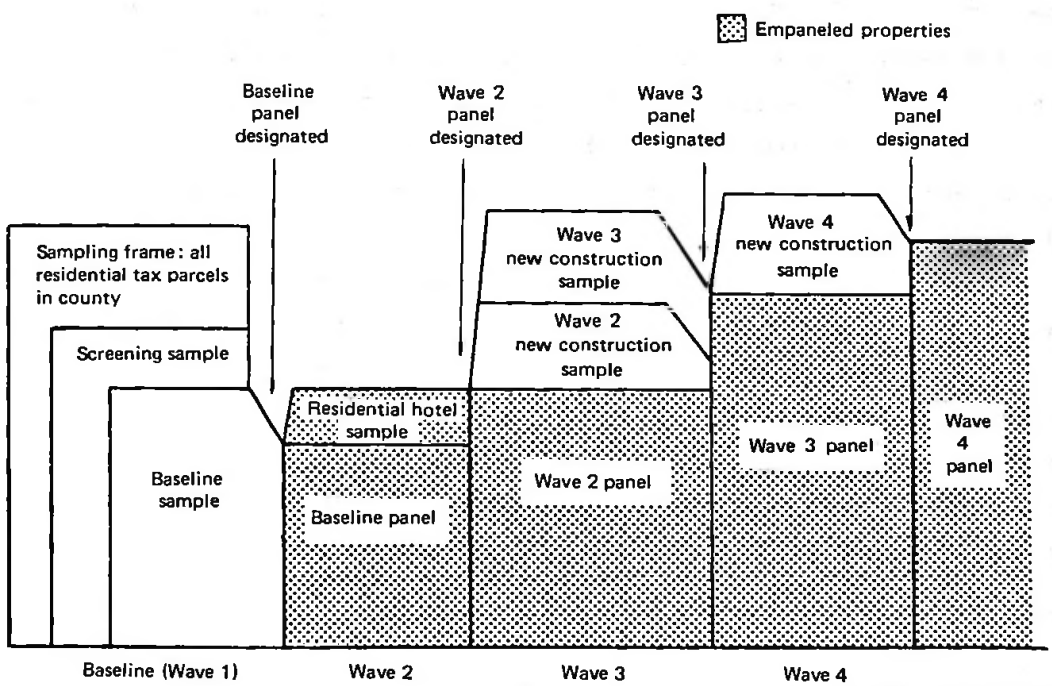

Fig. 4.3 —Panel selection and augmentation, Site II

year behind the corresponding waves in Brown County. Figure 4.4 depicts the timing of the surveys in relation to the allowance program.[12]

Each year's fieldwork required lengthy preparation. Rand staff reviewed the survey instruments and revised them to meet new analytic requirements, resolve field problems, and reduce respondent burden. As required, the revised instruments were submitted to HUD and the Office of Management and Budget for approval. Preparations also involved revision of field manuals and updating of lists of persons to be interviewed and properties and streets to be observed.

Rand's computer-based record management system, HAMISH (HASE Management of Information for the Survey of Housing), contained the master sample lists and key identifying information for all HASE surveys. The HAMISH master files not only described each property, building, and housing unit in the sample but also contained information about survey respondents and the results of survey attempts. HAMISH files were continually updated as field checks or postsurvey sample accounting revealed changes in the sample elements or respondents. Corrections were made retroactively as well as for the current wave. For example, if it was discovered in wave 2 that a certain housing unit was erroneously scheduled for survey, the baseline as well as wave 2 records were annotated accordingly. Since all HASE surveys drew on related sample elements, the findings from sample accounting for one element (e.g., a property in the landlord survey) might affect accounting for its related elements (e.g., units in the household survey). Having HAMISH as the repository for all sample lists facilitated consistent revisions.

The subcontractors hired a local staff of interviewers and observers and trained them using a Rand-approved manual. Up to 40 hours of training were required to qualify an interviewer. In fieldwork for the interview surveys, at least eight attempts were made over several months to contact a respondent before closing a case.

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[12] Figure 4.4 omits the secondary-research part of the neighborhood survey because it had no well-defined field period. Generally, secondary research was completed before street observations were begun.

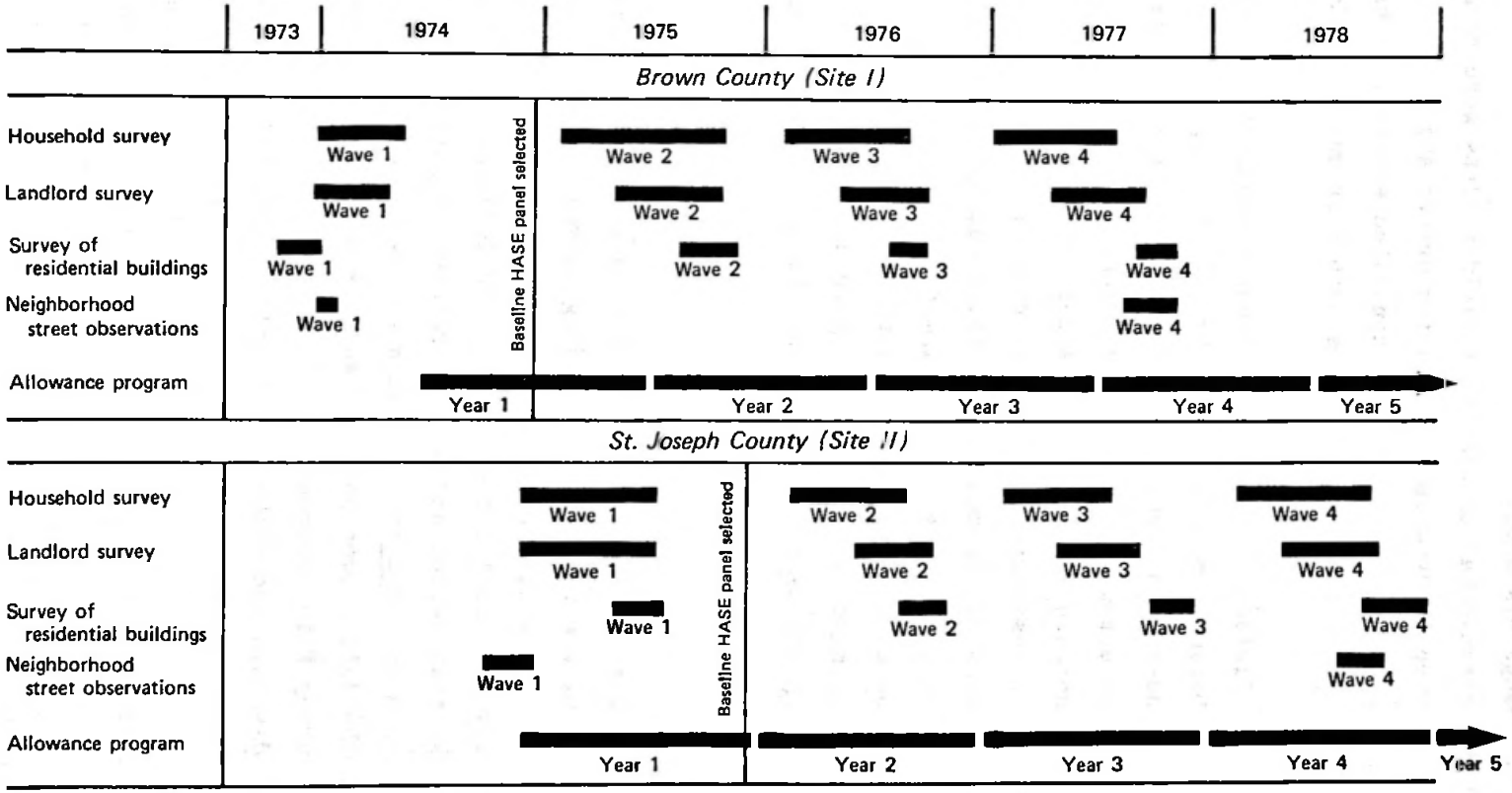

Fig. 4.4—Timing of HASE survey fieldwork in relation to allowance program

Refusals were documented and reviewed to see if the respondent might be persuaded to change his mind.

As completed questionnaires and other field reports were turned in to the field office, they were reviewed for errors and omissions. A sample was chosen for validation, which consisted either of a brief telephone reinterview with the original respondent or an independent field observation.

At the end of fieldwork, the completed questionnaires were sent to Rand, where verbatim responses were coded and all responses were entered into machine-readable records. The response fields in each record were then subjected to computerized checks for logical consistency and adherence to specified response ranges. All discrepancies were investigated. Many were resolved by referring to the original responses or fieldworkers' annotations on the hardcopy questionnaires. Suspect values were confirmed without change, corrected, or (if unresolved but clearly wrong) replaced with an audit code signifying missing or unusable data. Records were recycled through the cleaning checks to make sure the changes did not trigger new error messages.

SURVEY FILES

The survey cycles yielded 16 files for each site: 4 each for the landlord, household, and residential building surveys (waves 1 through 4), and 2 each for the neighborhood local sources and street observation surveys (waves 1 and 4). Each file is documented by one or more codebooks that define and provide response distributions for every variable, and an audit report that assesses the completeness and quality of the data. Codebooks and audit reports are individually listed under "Survey File Documentation," Sec. V.

Table 4.1 displays the number of records in each file--for both the total sample and the field-complete subset representing completed interviews or observations. Completion rates for the landlord and household interview surveys are lower than those for the residential building and neighborhood surveys because the latter depended on direct observation or secondary research and did not require the

Table 4.1

SUMMARY OF RECORDS ON HASE SURVEY FILES

Survey Wave	Brown County (Site I) Total Number of Records	Brown County (Site I) Number of Field-Complete Records[a]	Brown County (Site I) Completion Rate[b]	St. Joseph County (Site II) Total Number of Records	St. Joseph County (Site II) Number of Field-Complete Records[a]	St. Joseph County (Site II) Completion Rate[b]
Landlord Survey						
Wave 1	1,318	1,318	1.00[c]	1,417	1,404	.99[c]
Wave 2	1,360	1,105	.81	1,444	915	.63
Wave 3	1,347	935	.69	1,394	935	.67
Wave 4	1,314	910	.69	1,346	831	.62
All waves	5,339	4,268	.80	5,601	4,085	.73
Household Survey						
Wave 1	3,293	2,712	.82	3,559	2,066	.58
Wave 2	3,389	2,472	.73	3,603	1,958	.54
Wave 3	3,541	2,360	.67	3,696	2,143	.58
Wave 4	3,621	2,424	.67	3,686	2,103	.57
All waves	13,844	9,968	.72	14,544	8,270	.57
Residential Building Survey						
Wave 1	2,153	2,116	.98	2,515	2,366	.94
Wave 2	2,225	2,075	.93	10	6	.60
Wave 3	139	107	.77	140	131	.94
Wave 4	2,325	2,263	.97	2,557	2,429	.95
All waves	6,842	6,561	.96	5,222	4,932	.94
Neighborhood Local Sources Survey						
Wave 1	108	108	1.00	86	86	1.00
Wave 4	108	108	1.00	86	86	1.00
All waves	216	216	1.00	172	172	1.00
Neighborhood Street Observation Survey						
Wave 1	8,084	8,084	1.00	12,152	12,152	1.00
Wave 4	9,315	9,256	.99	12,933	12,852	.99
All waves	17,399	17,340	1.00	25,085	25,004	1.00

SOURCE: Tabulated by HASE staff from the final master files for all surveys.

[a] Records representing completed interviews or observations.

[b] Field-complete records divided by total records.

[c] Properties empaneled from a larger number surveyed at baseline. One of the empanelment criteria was complete baseline records (for rental properties, a landlord interview and at least one tenant interview; for homeowner properties, an interview with the owner-occupant).

cooperation of a respondent.[13] The incomplete records in the interview surveys are about evenly divided between cases in which fieldworkers were unable to contact the desired respondent despite repeated attempts and cases in which a contacted respondent refused to grant an interview.

The data available for longitudinal analysis can be gauged by the number of properties and rental units for which we obtained complete data for three and four waves (see Table 4.2). Although we empaneled

Table 4.2

AVAILABILITY OF LONGITUDINAL DATA FROM HASE SURVEYS OF RESIDENTIAL PROPERTIES

Sample Element	Elements Represented by Field-Complete Records			
	Brown County		St. Joseph County	
	3 Waves	4 Waves	3 Waves	4 Waves
Rental property	800	501	554	248
Rental unit	1,261	621	712	264
Homeowner property	501	376	405	288

SOURCE: Calculated by HASE staff from the final master files of landlord and household surveys, all waves.

NOTE: To qualify for enumeration here, *rental properties* had to be represented by field-complete records in both the landlord survey (landlord respondent) and household survey (at least one tenant respondent--not necessarily the same one each wave); *rental units* on empaneled properties had to be represented by complete records for the owner of the property and the current occupant of that specific unit; vacant units are excluded. *Homeowner properties* required complete data from only the owner, responding to the household survey. Properties and units that were merged or subdivided are excluded from this account.

[13] The wave 1 landlord survey departs from this pattern, however. Its completion rates are high because they reflect completion rates for only the baseline panel properties (not the larger number of baseline sample properties); except for a few cases in St. Joseph County, properties unrepresented by a field-complete record were excluded from the baseline panel.

about the same number of properties in each site, higher nonresponse rates and more vacancies in St. Joseph County resulted in fewer longitudinally complete records in the Site II files.

File Structure

Each of the 32 survey files contains one fixed-length record for every sample element in the survey type, site, and wave represented. Since sample elements vary by survey type, the records vary accordingly, as follows:

Survey Type	Record Represents
Landlord	Property
Household	Housing unit
Residential building	Building
Neighborhood local sources	HASE-defined neighborhood
Neighborhood street observation	Street segment

Within a site, the records for related sample elements can be linked across survey types in the same wave, or across waves in the same survey type. Because the numbering systems identifying properties overlap, records should not be linked across sites. Records in the survey files cannot be linked with records in the program files.

In addition to variables obtained directly from the survey, each record contains a number of derived variables, which we added for their analytic usefulness. Derived variables on the survey files consist of aggregations and other transformations of survey responses, data from other sources (such as other HASE surveys), sample selection indicators, and record weights.

For each file, a machine-readable dictionary gives the alphanumeric name, location, and length of every variable on the file.[14]

[14] For more details on file structure, see DUALabs Staff, Housing Research Data Center User Manual, Vol. 3: Primer of On-Line Access Procedures, DUALabs, June 1981.

File Contents

The following pages describe the information contained in the files for each survey.

Survey of Landlords. The survey of landlords elicited a detailed description of the ownership, management, and finances of the rental properties in the sample. Analysis of the data is expected to show how the owners of rental properties responded to the market stimulus provided by the allowance program.

In each wave, we sought a record of landlord rental revenues and expenses for building maintenance and operation during the preceding year, including a detailed account of repairs and improvements and their costs. We also gathered data on mortgage financing, property ownership and management, property and tenant characteristics, landlord-tenant relationships, and plans for the property. Finally, we sought landlords' impressions of the allowance program and how it had affected them. Table 4.3 describes the information contained in the files.

Survey of Households. From the current tenants of each rental unit in the sample, we sought a description of the interior features and condition of the dwelling, the amounts of contract rent and any other housing expenses, and an evaluation of the dwelling, the landlord, and the neighborhood. As background for analysis, we also obtained information on household composition and family characteristics, income, education, and occupation. An important element of the interview with a first-time respondent was a five-year residential and employment history for each household head, including household, housing, and employment characteristics at the time of each move.

The interview for homeowners covered similar ground but also included detailed questions on property ownership and characteristics, mortgage financing, and repair and improvement expenses similar to those addressed to landlords.

Both tenants and homeowners were asked about their perceptions of the allowance program and its effects on their housing and neighborhoods. Since the sample included both program participants

Table 4.3

CONTENTS OF THE LANDLORD SURVEY FILES

Topic	Information Recorded
Verification	Verification of owner and type of ownership. Number and relationship of owners. Names of other respondents appointed to answer certain sections of the instrument.
Acquisition and ownership	How property was acquired; reason for acquisition; purchase price. Capital improvements made by previous owner.
Experience and activity in real estate	Number of rental properties owned in county; percentage of income derived from real estate; length of time owner active in real estate; nature of other business involvement. Participation in property owners, real estate, or other organizations. Knowledge of tenant organizations.
Property description	Changes in property since previous year. Number and age of buildings; number and size of residential units; number of commercial units and mobile homes. Average monthly rent for each type of residential unit.
Income	Income received from property. Losses due to vacancies and bad debts. Type and amount of federal housing assistance received (Site II).
Expenses	Types of employees, wages, rent discounts. Use of management firm, lawyers, accountants, brokers, and other professional assistance. Office expenses. Utility costs.
Repairs and improvements	Expenses for remodeling, decorating, appliance replacement and repair, and repair work of all kinds. Description of each repair to determine whether it was operating or capital expense. Materials and labor costs. Imputed value of time spent by owner and unpaid workers on property's management and maintenance.

Table 4.3 (Cont.)

Topic	Information Recorded
Mortgage, taxes, and insurance	Costs and terms associated with all mortgages, taxes, and property insurance.
Tenants	Turnover rates, evictions, tenant complaints, lease policies, and satisfaction with tenants.
Neighborhood	Characteristics of the neighborhood and perceptions of change. Satisfaction with neighborhood as place to own rental property.
Plans for property	Condition of residential buildings on the property. Plans for capital improvements. Owner's evaluation of future market value and financial return from the property.
Attitudes	Respondent's knowledge of and attitude about the housing allowance program.
Previous owner's account	For portion of the year property was owned: income and expenses for property management, maintenance, repairs, improvements, mortgages, taxes, and insurance.

SOURCE: Adapted from Patricia Boren, *Codebook for the Survey of Landlords, Site II, Wave 2*, The Rand Corporation, N-1140-HUD, May 1981, p. 6.

NOTE: Landlord survey files each contain an average of 2,800 survey variables and 200 derived variables per record (precise numbers vary because of instrument revisions and changing analytic needs).

and nonparticipants, both views are represented. Table 4.4 describes the contents of the files.

Survey of Residential Buildings. Through direct observation, the survey of residential buildings gathered data on residential buildings, the properties on which they stood, and their immediate neighborhoods. The survey instrument was designed to detect structural alterations or improvements and changes in physical characteristics or condition over time.

Observers conducted the survey from the sampled property unless the resident objected or access was physically prevented. Then they attempted the observation from an off-property vantage point. Observations were restricted to the exteriors of all buildings and the interior public areas (e.g., hallways, lobbies) of multiunit structures. File contents are described in Table 4.5.

Neighborhood Survey. The neighborhood survey gathered information on the physical characteristics of the entire county, with HASE-defined neighborhoods and street segments as the units of observation. Neighborhood survey data contribute to analyses of the effect of location on housing; the data may also help explain differences in the views and behavior of the landlords, tenants, and homeowners interviewed in our other surveys.

We divided each county's territory into mutually exclusive neighborhoods, attempting to make the boundaries conform to those of 1970 census blocks, enumeration districts, and local planning districts. In the urbanized portion of the county, neighborhoods were small and configured to contain relatively homogeneous populations and housing stocks; rural neighborhoods were larger and less homogeneous. Population size varied, with most neighborhoods consisting of 1,000 to 4,000 households.

The survey had two parts that corresponded to the two observation units. For the local sources survey, fieldworkers compiled facts about each neighborhood by means of secondary research; for the street observation survey, fieldworkers recorded the characteristics of each street segment by direct observation. The two parts had separate instruments and produced separate data files (see Table 4.6).

Table 4.4

CONTENTS OF THE HOUSEHOLD SURVEY FILES

Topic	Information Recorded
Introduction	Primary characteristics of housing unit--type of residence, tenure of respondent, (tenant, homeowner, mobile home resident, lodger).
Characteristics	Description of residence and its condition. Respondent's level of satisfaction with various aspects of the dwelling. Perception of neighborhood characteristics. Proximity to friends and relatives. Tenant's relations with landlord.
Housing expenses	For tenants, contract rent and special considerations affecting rent. For homeowners, date and method of acquiring property, costs and terms associated with all mortgages and taxes. For all respondents, costs of utilities, major remodeling, other repairs and improvements, and insurance.
Mobility history	Location, housing characteristics, expenses, and dates of previous residences; perception of former neighborhood and reasons for moving to present address. Methods used to find present dwelling and costs of moving.
Employment history	Industry, occupation, and wage rate of respondent and spouse for present and previous jobs. Time, distance, and mode of travel to work. (Separate data for male and female heads of household.)
Household composition, income, and ethnicity	For all regular members of the household: name, age, sex, relationship to respondents, school enrollment, and grade. Household income by source. Ethnic background.
Evaluation of housing allowance program	Respondent's knowledge of and attitudes about the housing allowance program.

SOURCE: Adapted from Patricia Boren, *Codebook for the Survey of Tenants and Homeowners, Site II, Wave 2*, The Rand Corporation, N-1139-HUD, May 1981, p. 3.

NOTE: Household survey files each contain an average of 4,400 variables and 250 derived variables per record (precise numbers vary because of instrument revisions and changing analytic needs).

Table 4.5

CONTENTS OF THE RESIDENTIAL BUILDING SURVEY FILES

Topic	Information Recorded
Nature of use and tenancy	Building inhabitable or uninhabitable. Evidence of commercial or industrial uses. Evidence of vacancies; marketability of building if vacant.
Physical characteristics of building	Type and layout of structure, placement on lot, observability, principal construction materials.
Related tenant facilities	Availability of garage, carport, and on- or off-street parking. Quality of landscaping, presence of swimming pool, condition of sidewalks.
Exterior condition of building	Presence and condition of exterior items (roof, wall surfaces, doors, windows and screens, porches, foundations, paving, etc.) and overall state of repair.
Interior condition of public areas in multi-unit dwellings	Presence and condition of interior items (doors, floors, walls and woodwork, windows, ceilings, lighting fixtures, mailboxes, stairways, banisters, elevator, door locks, fire alarms, and extinguishers), and overall state of repair and cleanliness.
Characteristics of immediate neighborhood	Land uses, vehicular traffic, street lighting, pedestrian walkways, street maintenance, litter, abandoned automobiles and buildings. For other residential buildings in the area, characteristic types, comparative size, age, and landscaping. Beneficial and detrimental features of neighborhood (noise, odors, physical hazards, parks, ponds, woodlands, etc.).

SOURCE: Adapted from Patricia Boren, *Codebook for the Survey of Residential Buildings, Site II, Wave 2*, The Rand Corporation, June 1980, p. 3.

NOTE: Residential building survey files each contain an average of 840 survey variables and 175 derived variables per record (precise numbers vary because of instrument revisions and changing analytic needs).

Table 4.6

CONTENTS OF THE NEIGHBORHOOD SURVEY FILES

Topic	Information Recorded
Local Sources Survey[a]	
Land use	Acreage devoted to a selected list of land uses.
Access to facilities and services	Number of facilities (institutional, recreational, religious, educational, commercial) and distance of nearest facility from neighborhood center; church membership and weekly attendance; availability of public and private utility services.
Soil	Effect of soil limitations on residential improvement.
Highways, arterials, public streets, planned highways, and railroads	Description of federal and state routes, major arterials, local streets, planned highways, and railroads, including route-miles.
Bodies of water	Description of lakes, rivers, and streams, including total surface acres, location, and use (swimming, fishing, etc.).
Air and noise pollution	Severity of particulate matter; average noise level. Location of pollution monitoring equipment.
School, crime, and employment statistics	Name and type of school, design capacity, enrollment, teacher-pupil ratios, number of dropouts, and achievement test code and score. Number of major crimes. Number of employers and employees; unemployment statistics.
Street Observation Survey[b]	
Quality and condition ratings	Ratings for residential buildings and landscaping, vacant lots, streets, sidewalks, and overall cleanliness.
Special features	Presence of construction in progress and abandoned buildings or vehicles.
Land use	Presence of a selected list of land uses or estimates of the percentage of street segment devoted to each land use listed.

SOURCE: HASE Survey Group, *Codebook for the Survey of Neighborhoods, Site I, Baseline*, N-1076-HUD, March 1981; Patricia Boren, *Codebook for the Survey of Neighborhoods, Site I, Wave 4*, N-1361-HUD, March 1980; HASE Survey Group, *Codebook for the Survey of Neighborhoods, Site II, Baseline*, N-1128-HUD, April 1981; Patricia Boren, Carol Hillestad, *Codebook for the Survey of Neighborhoods, Site II, Wave 4*, N-1362-HUD, August 1980. All are published by The Rand Corporation.

NOTE: This is a composite description. The contents of individual files vary according to the availability or applicability of data.

[a]Local sources files each contain an average of 500 survey variables and 20 derived variables per record.

[b]Street observation files each contain an average of 115 survey variables and 10 derived variables per record.

V. RELATED HASE PUBLICATIONS

From the some 300 monographs published by Rand to document the plans, methods, and findings of the Supply Experiment, this section lists and briefly describes those that are pertinent to the HASE data files.[1] They are indexed by subject, so some titles appear more than once. Within subjects, publications are listed in order of publication number, which is roughly chronological. A short narrative follows each list indicating the specific topics, scope, and interrelationship of the publications covered.

SITE SELECTION

N-1025-HUD. Testing the Supply Response to Housing Allowances: An Experimental Design. Ira S. Lowry, C. Peter Rydell, David de Ferranti. February 1981. (First issued as WN-7711-UI, December 1971.) 165 pp.

N-1026-HUD. Site Selection for the Housing Assistance Supply Experiment: Stage I. Housing Assistance Supply Experiment Staff. July 1980. (First issued as WN-7833-HUD, May 1972.) 75 pp.

N-1033-HUD. Site Selection for the Housing Assistance Supply Experiment: SMSAs Proposed for Site Visits (A Briefing). Housing Assistance Supply Experiment Staff. July 1980. (First issued as WN-7907-HUD, August 1972.) 11 pp.

N-1035-HUD. Estimates of Eligibility and Allowance Entitlement under Alternative Housing Allowance Programs. Barbara M. Woodfill, Tiina Repnau. July 1980. (First issued as WN-7974-HUD, September 1972.) 125 pp.

N-1041-HUD. Collected Site Selection Documents: Housing Assistance Supply Experiment. R. Dubinsky. July 1980. (First issued as WN-8034-HUD, January 1973.) 61 pp.

R-2630-HUD. The Design of the Housing Assistance Supply Experiment. Ira S. Lowry (ed.). June 1980. 338 pp.

[1] For the full list of HASE publications, see Ira S. Lowry, ed., Experimenting with Housing Allowances: Final Report of the Housing Assistance Supply Experiment, The Rand Corporation, R-2740-HUD, forthcoming.

Following the experimental design proposed in N-1025, we screened 217 SMSAs and 14 State Economic Areas (SEAs) for suitability as HASE sites. As reported in N-1026, we selected 19 preliminary candidates that met the following criteria:

- Had a 1970 population of 100,000 to 250,000.
- Fell in one of two categories combining 1960-70 population growth and percentage of black population in 1970: (a) fast growth (6.9+ percent) and low percent black (<10.8 percent), or (b) slow growth (<6.9 percent) and high percent black (10.8+ percent).
- Was not part of an interstate or other larger housing market.
- Had a HUD-recognized housing authority.

Six candidates were then chosen for visits by a Rand-HUD team and preliminary discussions with local officials; N-1033 consists of briefing charts comparing features of the six sites. N-1041 reviews the early progress in site selection and reproduces the questionnaires and briefing charts used in the site visits. N-1035 compares projected costs of administering the allowance program in the six sites and recommends the two least expensive--Green Bay, Wisconsin, and Saginaw, Michigan. Local officials in Saginaw ultimately declined to participate, whereupon St. Joseph County was chosen as the second site; that development is summarized in R-2630.

THE ALLOWANCE PROGRAM

We list only the publications that are most pertinent to the program files.

N-1102-HUD. Inflation in the Standard Cost of Adequate Housing: Site I, 1973-1976. Ira S. Lowry. October 1979. (First issued as WN-9430-HUD, March 1976.) 125 pp.

N-1116-HUD. Rent Inflation in St. Joseph County, Indiana: 1974-1977. James P. Stucker. November 1979. (First issued as WN-9734-HUD, September 1977.) 93 pp.

N-1124-HUD. Client Responses to Housing Requirements: The First Two Years. Bruce W. Lamar and Ira S. Lowry. (First issued as WN-9814-HUD, February 1979.) 98 pp.

N-1134-HUD. Rent Inflation in Brown County, Wisconsin: 1973-78. James P. Stucker. March 1981. (First issued as WN-10073-HUD, August 1978.) 94 pp.

N-1198-HUD. Housing Allowances and Housing Improvement: Early Findings. James L. McDowell. September 1979. 120 pp.

N-1491-HUD. The Housing Allowance Office Handbook. Iao Katagiri and G. Thomas Kingsley, eds. July 1980. 571 pp.

R-2544-HUD. Sixth Annual Report of the Housing Assistance Supply Experiment. May 1980. 103 pp.

R-2630-HUD. The Design of the Housing Assistance Supply Experiment. Ira S. Lowry, ed. June 1980. 338 pp.

The overall design of the allowance program, its goals and their planned implementation, are discussed in R-2630. The status of the program at the end of the experimental phase (year 5) is described in R-2544. Detailed procedural guidelines for client and housing certification, payment disbursement, recordkeeping, and data processing are specified in N-1491. N-1124 examines the HAO's experience with clients during the program's first two years, with informative charts depicting decision trees and client flow. Several adjustments were made to the standard cost of adequate housing, one of the bases for determining allowance entitlement. N-1102, N-1116, and N-1134 provide the justifications. The rationale for adding detailed information on housing repairs to HAO administrative records (and ultimately the HCF) is presented in N-1198.

PROGRAM FILE DOCUMENTATION

Codebooks and audit reports are the primary forms of documentation for the eight program files. Codebooks summarize file

contents[2]; audit reports assess the completeness and reliability of the data. Each file is represented by at least one codebook and one audit report.

Site I

N-1417-HUD. Codebook for the HAO Client Characteristics File, Site I, Year 5. Ann W. Wang. October 1980. 215 pp.

N-1419-HUD. Codebook for the HAO Housing Characteristics File, Site I, Year 5. Ann W. Wang. February 1981. 108 pp.

N-1421-HUD. Codebook for the HAO Recertification Characteristics File, Site I, Year 5. Ann W. Wang. March 1981. 94 pp.

N-1149-HUD. Audit of the HAO Analysis Files, Site I, Year 3. Ann W. Wang. May 1979. 28 pp.

N-1423-HUD. Audit of the HAO Analysis Files, Site I, Year 5. Ann W. Wang. November 1981. 26 pp.

N-1711-HUD. The HAO Client History File. Charles A. Hubay, Clairessa Cantrell. Forthcoming.

Site II

N-1418-HUD. Codebook for the HAO Client Characteristics File, Site II, Year 5. Ann W. Wang. September 1981. 191 pp.

N-1420-HUD. Codebook for the HAO Housing Characteristics File, Site II, Year 5. Ann W. Wang. September 1981. 107 pp.

N-1422-HUD. Codebook for the HAO Recertification Characteristics File, Site II, Year 5. Ann W. Wang. September 1981. 80 pp.

N-1318-HUD. Audit of the HAO Analysis Files, Site II, Year 3. Ann W. Wang. October 1979. 26 pp.

N-1424-HUD. Audit of the HAO Analysis Files, Site II, Year 5. Ann W. Wang. Forthcoming.

N-1711-HUD. The HAO Client History File. Charles A. Hubay, Clairessa Cantrell. Forthcoming.

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[2] The codebooks reflect file contents accurately for the most part but not in every detail. Some data errors were discovered too late for codebook publication, though the files themselves were corrected.

The codebooks describe each variable in detail, reproduce the HAO administrative forms from which the variables were taken, and provide frequency distributions of the data. There are six HAO codebooks covering five years of program data, one for the client, housing, and recertification characteristics files in each site.[3]

At each stage in the development of the program files, we audited the data by running various manual and computerized checks to detect and correct errors. The procedures and results of those checks are described in four audit reports, two for each site covering cumulative CCF, HCF, and RCF data as of year 3 and again as of year 5. The master client history files, one for each site, are documented in a single report that is part user's guide, codebook, and audit report (N-1711).

SURVEY SAMPLE DESIGN AND SELECTION

General

N-1027-HUD. Preliminary Design for the Housing Assistance Supply Experiment. I. S. Lowry. July 1980. (First issued as WN-7866-HUD, June 1972.) 81 pp.

N-1037-HUD. Supplemental Design Papers for the Housing Assistance Supply Experiment. Housing Assistance Supply Experiment Staff. October 1980. (First issued as WN-7982-HUD, July 1972.) 61 pp.

N-1040-HUD. Sample Design for the Housing Assistance Supply Experiment. Timothy M. Corcoran, Eugene C. Poggio, Tiina Repnau. October 1980. (First issued as WN-8029-HUD, November 1972.) 139 pp.

N-1045-HUD. The Effects of Nonresponse on Record Completion in a Panel of Residential Properties. Timothy M. Corcoran. December 1980. (First issued as WN-8174-HUD, April 1973.) 55 pp.

N-1049-HUD. The Role of Household Survey Data in the Supply Experiment. Adele R. Palmer (ed.). (First issued as WN-8218-HUD, March 1973.) 111 pp.

R-2630-HUD. The Design of the Housing Assistance Supply Experiment. Ira S. Lowry (ed.). June 1980. 338 pp.

[3] The year 5 codebooks supersede all previously published codebooks because the program files are cumulative.

Early HASE sample designs are proposed in N-1027 and N-1037. Most of the basic sample design is set forth in N-1040, to be later developed in detail for each site. Section IV of R-2630 updates N-1040, integrating the household survey and sampling issues raised in N-1049 and accounting for the estimated panel attrition rates in N-1045. Users are cautioned to be wary of specific details in R-2630 because sample design was further revised after the document's original publication.

Site I

N-1043-HUD. Preliminary Description of Sample-Selection Procedure. Eugene Poggio. October 1980. (First issued as WN-8101-HUD, January 1973.) 11 pp.

N-1047-HUD. Sample-Selection Procedures for Site I. Eugene C. Poggio. December 1980. (First issued as WN-8201-HUD, March 1973.) 17 pp.

N-1064-HUD. Sampling Nonresidential Properties: Site I. Timothy M. Corcoran. December 1980. (First issued as WN-8623-HUD, March 1974.) 23 pp.

N-1065-HUD. Survey Sample Design for Site I. Timothy M. Corcoran. February 1981. (First issued as WN-8640-HUD, March 1974.) 113 pp.

N-1066-HUD. Selecting the Baseline Sample of Residential Properties: Site I. Eugene C. Poggio. February 1981. (First issued as WN-8645-HUD, March 1977.) 107 pp.

N-1067-HUD. Characteristics of the Residential Baseline Survey Samples for Site I. Tiina Repnau. March 1981. (First issued as WN-8682-HUD, May 1974.) 59 pp.

N-1107-HUD. Selecting the Permanent Panel of Residential Properties, Site I. Timothy M. Corcoran. April 1981. (First issued as WN-9575-HUD, April 1978.) 89 pp.

N-1448-HUD. Augmenting the HASE Panel of Residential Properties, Site I. E. Wayne Hansen and Marsha E. Baran. Forthcoming.

R-1659-HUD. First Annual Report of the Housing Assistance Supply Experiment. October 1974. 85 pp.

The basic sample design for Site I is set forth in N-1065. Building on N-1040 and the findings from N-1049 and N-1045, it incorporates the research objectives stated in R-2630 and the scaled-down sample explained in R-1659. The mechanics of selecting the sample are briefly covered in N-1043 and N-1047. A casualty of the decision to trim the sample was the sample of nonresidential properties discussed in N-1064.

After the residential property sample was selected (as specified in N-1065), the screening survey was administered and the baseline sample selected. Procedures for selecting and stratifying baseline sample properties are described in N-1066. The characteristics of those properties are described in N-1067. The results of the baseline survey were used to select and stratify properties and units in the baseline HASE panel, documented in N-1107. At each later survey wave, the panel was increased by a complement of residential properties, as described in N-1448. Postsurvey audits occasionally uncovered sampling errors, which are explained in detail in the relevant audit reports.

Site II

N-1061-HUD. Sample Selection Procedure for St. Joseph County, Indiana. Sandra H. Berry, Daniel A. Relles, Eugene Seals. May 1981. (First issued as WN-8588-HUD, January 1974.) 41 pp.

N-1090-HUD. Selecting the Baseline Sample of Residential Properties: Site II. Daniel A. Relles. May 1981. (First issued as WN-9027-HUD, October 1975.) 108 pp.

N-1109-HUD. Selecting the Permanent Panel for Residential Properties: Site II. Timothy M. Corcoran. April 1981. (First issued as WN-9577-HUD, April 1977.) 121 pp.

N-1614-HUD. Augmenting the HASE Panel of Residential Properties, Site II. E. Wayne Hansen and Patricia Boren. Forthcoming.

The sampling experiences and procedures developed for Site I (N-1065, N-1066, N-1067, and N-1047) were used to select the Site II baseline sample, which is fully documented in N-1090. The technical

procedures are described in N-1061. Selection of the HASE panel is documented in N-1109, and its periodic augmentation is described in N-1614. Corrections of individual sampling errors are described in relevant Site II audit reports.

SURVEY DESIGN

N-1027-HUD. Preliminary Design for the Housing Assistance Supply Experiment. I. S. Lowry. July 1980. (First issued as WN-7866-HUD, June 1972.) 81 pp.

N-1028-HUD. Preliminary Description of Survey Instruments. Housing Assistance Supply Experiment Staff. July 1980. (First issued as WN-7883-HUD, June 1972.) 25 pp.

N-1055-HUD. Neighborhoods in Brown County. Bryan Ellickson. December 1980. (First issued as WN-8468-HUD, November 1973.) 55 pp.

N-1060-HUD. Market Intermediaries and Indirect Suppliers: Reconnaissance and Research Design for Site I. William G. Grigsby, Michael Shanley, Sammis B. White. July 1980. (First issued as WN-8577-HUD, February 1974.) 65 pp.

N-1071-HUD. The Screening Survey Instrument and Supplementary Forms: Site I. HASE Survey Group. March 1981. (First issued as WN-8688-HUD, July 1974.) 93 pp.

N-1072-HUD. Interviewer Training Manual for the Site I Screening Survey. HASE Survey Group. May 1981. (First issued as WN-8689-HUD, October 1974.) 125 pp.

N-1074-HUD. Codebook for the Survey of Tenants and Homeowners, Site I, Baseline. HASE Survey Group. March 1981. (First issued as WN-8809-HUD, December 1975.) 821 pp.

N-1075-HUD. Codebook for the Baseline Survey of Residential Buildings in Site I. Ann W. Wang, Charles W. Noland. March 1981. (First issued as WN-8810-HUD, February 1975.) 85 pp.

N-1076-HUD. Codebook for the Survey of Neighborhoods, Site I, Baseline. HASE Survey Group. March 1981. (First issued as WN-8811-HUD, June 1977.) 167 pp.

N-1077-HUD. Index to the Site I Maps. Doris Dong. March 1981. (First issued as WN-8819-HUD, August 1974.) 75 pp.

N-1080-HUD. Codebook for the Baseline Landlord Survey in Site I. Ann W. Wang, Doris Crocker, Stephanie Schank. May 1981. (First issued as WN-8976-HUD, March 1975.) 395 pp.

N-1089-HUD. Market Intermediaries and Indirect Suppliers: Reconnaissance and Research Design for Site II. William G. Grigsby, Michael Shanley, Sammis B. White. July 1980. (First issued as WN-9026-HUD, May 1975.) 57 pp.

N-1106-HUD. Are Further Survey Cycles Needed in Site I? Ira S. Lowry. March 1981. (First issued as WN-9541-HUD, July 1976.) 65 pp.

N-1122-HUD. Codebook for the Attitude Module of the Landlord Survey, Site II, Baseline. Phyllis L. Ellickson, David E. Kanouse, HASE Survey Group. May 1981. (First issued as WN-9801-HUD, April 1978.) 83 pp.

N-1123-HUD. Codebook for the Attitude Module of the Survey of Tenants and Homeowners, Site II, Baseline. Phyllis L. Ellickson, HASE Survey Group. May 1981. (First issued as WN-9802-HUD, November 1977.) 91 pp.

N-1127-HUD. Index to the Site II Maps. Housing Assistance Supply Experiment Staff. May 1981. (First issued as WN-9901-HUD, December 1977.) 75 pp.

N-1205-HUD. Neighborhoods in St. Joseph County, Indiana. John E. Bala. September 1979. 47 pp.

N-1321-HUD. Survey Operations for the Neighborhood Street Observation Survey, Site I, Wave 4. Marilyn Fisher. Forthcoming.

N-1487-HUD. Survey Operations for the Neighborhood Street Observation Survey, Site II, Wave 4. Marilyn Fisher. Forthcoming.

N-1537-HUD. Survey of HAO Clients Who Enrolled But Never Received Payments: Audit Report and Codebook. Diane Schoeff. Forthcoming.

N-1538-HUD. Survey of HAO Client Landlords, Site II: Audit Report and Codebook. Diane Schoeff. Forthcoming.

R-2630-HUD. The Design of the Housing Assistance Supply Experiment. Ira S. Lowry (ed.). June 1980. 338 pp.

Early views of survey data requirements and strategy are presented in N-1027. That preliminary design is expanded into a framework for

developing the landlord, tenant, and building survey instruments in N-1028. Final plans for the contents, strategy, and roles of the surveys in the experimental design are summarized in R-2630. A major revision, considered in N-1106, was the decision to reduce the survey agenda from six annual waves to four.

To aid in selecting the baseline sample, a brief screening survey was administered to the owners and occupants of a large marketwide sample of residential properties. The Site I instrument and interviewer instructions are documented in N-1071 and N-1072, respectively.

The first versions of the detailed survey instruments are documented in the baseline codebooks for Site I (Ns 1074-1076, 1080). The most important subsequent instrument change was the development of the attitude module, questions eliciting the respondent's knowledge of and opinions about the allowance program. Attitude modules were incorporated in the landlord and household survey instruments for Site II baseline (see N-1122, N-1123) and were added to the postbaseline landlord and household survey instruments in Site I. The detailed instruments are documented in the codebooks for each file (see "Survey File Documentation," below).

Unlike the other HASE surveys, which were addressed to samples, the neighborhood surveys were addressed to the entire county, with HASE-defined neighborhoods and street segments as units of observation. N-1055 and N-1205 present the rationale and procedures for defining neighborhoods. Fieldwork procedures and instrument changes for the street observation survey are detailed in N-1321 and N-1487. N-1077 and N-1127 inventory all maps to be used in the project, especially for the neighborhood surveys. For each map, the source, scale, date, description, and estimate of accuracy are provided.

Under contract to the Housing Allowance Offices (HAOs), we conducted a survey of clients in both sites who enrolled in the allowance program but terminated without ever receiving payments (documented in N-1537) and a survey of the landlords of program clients in Site II (documented in N-1538).

HASE fielded two other surveys that did not yield machine-readable data files. The survey of market intermediaries such as mortgage lenders, real estate brokers, and home improvement contractors is documented in N-1060 and N-1089 for the two sites, respectively.

SURVEY FILE DOCUMENTATION

Codebooks and audit reports are the primary forms of documentation for the 32 HASE survey files. Codebooks summarize file contents[4]; audit reports assess the completeness and quality of the data. Each file is represented by at least one codebook and one audit report. Since most users will be interested in a particular survey type, we cite codebooks and audit reports together by survey rather than provide separate lists by publication type. As the following list shows, Rand published codebooks individually; DUALabs has combined the codebooks for all 40 HASE files in Housing Research Data Center User Manual, Vol. 2: HASE Program and Survey File Codebooks, forthcoming.

Landlord Survey

Site I, Baseline

N-1080-HUD. Codebook for the Baseline Landlord Survey in Site I. Ann W. Wang, Doris Crocker, Stephanie Schank. May 1981. (First issued as WN-8976-HUD, March 1975.) 395 pp.

N-1381-HUD. Supplemental Codebook for the Baseline Survey of Landlords, Site I. Kenneth Wong, Patricia Boren. September 1980. 258 pp.

N-1081-HUD. Audit of the Baseline Landlord Survey in Site I. Richard E. Stanton, Therman P. Britt. October 1979. (First issued as WN-8977-HUD, June 1977.) 201 pp.

[4] The codebooks do not reflect file contents exactly. After publication of the codebooks, some errors were discovered in the data, and the findings of sample accounting necessitated changes in sample sizes. As a result, response distributions published in the codebooks will not necessarily agree with those calculated from the corrected files. In most cases the differences are slight. However, the discrepancy between the baseline landlord and household survey files and main-survey codebooks (Ns 1074, 1080, 1104, and 1112) is considerable because those codebooks apply to the baseline sample, whereas the files (and supplemental codebooks) apply to the smaller baseline HASE panel.

Site I, Wave 2

N-1189-HUD. Codebook for the Survey of Landlords, Site I, Wave 2. Patricia Boren. June 1979. 654 pp.

N-1363-HUD. Codebook for the Attitude Module of the Landlord Survey, Site I, Wave 2. Roger Johnston, Patricia Boren. January 1980. 94 pp.

N-1382-HUD. Supplemental Codebook for the Survey of Landlords, Site I, Wave 2. Kenneth Wong, Patricia Boren, Sally Trude. January 1980. 250 pp.

N-1398-HUD. Audit of the Landlord Survey, Site I, Wave 2. John W. Dawson. February 1981. 71 pp.

Site I, Wave 3

N-1349-HUD. Codebook for the Survey of Landlords, Site I, Wave 3. Patricia Boren. January 1980. 640 pp.

N-1364-HUD. Codebook for the Attitude Module of the Landlord Survey, Site I, Wave 3. Patricia Boren. February 1980. 64 pp.

N-1383-HUD. Supplemental Codebook for the Survey of Landlords, Site I, Wave 3. Kenneth Wong, Patricia Boren. February 1980. 265 pp.

N-1399-HUD. Audit of the Landlord Survey, Site I, Wave 3. Roger Johnston. Forthcoming.

Site I, Wave 4

N-1351-HUD. Codebook for the Survey of Landlords, Site I, Wave 4. Patricia Boren. February 1980. 538 pp.

N-1365-HUD. Codebook for the Attitude Module of the Landlord Survey, Site I, Wave 4. Patricia Boren, Christina Witsberger. March 1980. 80 pp.

N-1384-HUD. Supplemental Codebook for the Survey of Landlords, Site I, Wave 4. Kenneth Wong, Patricia Boren. March 1980. 263 pp.

N-1400-HUD. Audit of the Landlord Survey, Site I, Wave 4. FDG Staff. Forthcoming.

Site II, Baseline

N-1104-HUD. Codebook for the Survey of Landlords, Site II, Baseline. HASE Survey Group. April 1981. (First issued as WN-9444-HUD, July 1976.) 579 pp.

N-1122-HUD. Codebook for the Attitude Module of the Landlord Survey, Site II, Baseline. Phyllis L. Ellickson, David E. Kanouse, HASE Survey Group. May 1981. (First issued as WN-9801-HUD, April 1978.) 83 pp.

N-1385-HUD. Supplemental Codebook for the Baseline Survey of Landlords, Site II. Patricia Boren, Kenneth Wong. December 1980. 236 pp.

N-1121-HUD. Audit of the Baseline Landlord Survey in Site II. Richard E. Stanton, Therman P. Britt. October 1979. (First issued as WN-9739-HUD, February 1979.) 159 pp.

Site II, Wave 2

N-1140-HUD. Codebook for the Survey of Landlords, Site II, Wave 2. Patricia Boren. May 1981. (First issued as WN-10294-HUD, December 1978.) 607 pp.

N-1142-HUD. Codebook for the Attitude Module of the Landlord Survey, Site II, Wave 2. Patricia Boren, Roger Johnston. May 1980. (First issued as WN-10422-HUD, February 1979.) 110 pp.

N-1386-HUD. Supplemental Codebook for the Survey of Landlords, Site II, Wave 2. Patricia Boren, Kenneth Wong. May 1980. 270 pp.

N-1401-HUD. Audit of the Landlord Survey, Site II, Wave 2. John W. Dawson and Roger Johnston. Forthcoming.

N-1329-HUD. Audit of the Landlord Attitude Survey, Site II, Wave 2. Roger Johnston. September 1980. 32 pp.

Site II, Wave 3

N-1352-HUD. Codebook for the Survey of Landlords, Site II, Wave 3. Patricia Boren. June 1980. 530 pp.

N-1366-HUD. Codebook for the Attitude Module of the Landlord Survey, Site II, Wave 3. Patricia Boren, Christina Witsberger. July 1980. 62 pp.

N-1387-HUD. Supplemental Codebook for the Survey of Landlords, Site II, Wave 3. Patricia Boren, Kenneth Wong. July 1980. 267 pp.

N-1402-HUD. Audit of the Landlord Survey, Site II, Wave 3. FDG Staff. Forthcoming.

Site II, Wave 4

N-1353-HUD. Codebook for the Survey of Landlords, Site II, Wave 4. Patricia Boren, Deborah Wesley. July 1980. 518 pp.

N-1367-HUD. Codebook for the Attitude Module of the Landlord Survey, Site II, Wave 4. Patricia Boren, Christina Witsberger. August 1980. 78 pp.

N-1388-HUD. Supplemental Codebook for the Survey of Landlords, Site II, Wave 4. Patricia Boren, Kenneth Wong. August 1980. 259 pp.

N-1403-HUD. Audit of the Landlord Survey, Site II, Wave 4. FDG Staff. Forthcoming.

Household Survey

Site I, Baseline

N-1074-HUD. Codebook for the Survey of Tenants and Homeowners, Site I, Baseline. HASE Survey Group. March 1981. (First issued as WN-8809-HUD, December 1975.) 821 pp.

N-1373-HUD. Supplemental Codebook for the Baseline Household Survey, Site I. Evelyn C. Casper. October 1980. 322 pp.

N-1097-HUD. Audit of the Baseline Household Survey in Site I. Lawrence Helbers. October 1979. (First issued as WN-9229-HUD, February 1979.) 125 pp.

Site I, Wave 2

N-1190-HUD. Codebook for the Household Survey, Site I, Wave 2. Patricia Boren. July 1979. 1057 pp.

N-1368-HUD. Codebook for the Attitude Module of the Household Survey, Site I, Wave 2. Patricia Boren. January 1980. 94 pp.

N-1374-HUD. Supplemental Codebook for the Household Survey, Site I, Wave 2. Sally Trude, Evelyn Casper, Roberta Allen. January 1980. 299 pp.

N-1410-HUD. Audit of the Household Survey, Site I, Wave 2. Carole Beauchemin. Forthcoming.

Site I, Wave 3

N-1309-HUD. Codebook for the Household Survey, Site I, Wave 3. Patricia Boren. November 1979. 1003 pp.

N-1345-HUD. Codebook for the Attitude Module of the Household Survey, Site I, Wave 3. Patricia Boren. January 1980. 112 pp.

N-1375-HUD. Supplemental Codebook for the Household Survey, Site I, Wave 3. Evelyn Casper, Roberta Allen, Sally Trude. February 1980. 302 pp.

N-1411-HUD. Audit of the Household Survey, Site I, Wave 3. FDG Staff. Forthcoming.

Site I, Wave 4

N-1358-HUD. Codebook for the Household Survey, Site I, Wave 4. Patricia Boren. March 1980. 892 pp.

N-1370-HUD. Codebook for the Attitude Module of the Household Survey, Site I, Wave 4. Patricia Boren. March 1980. 112 pp.

N-1376-HUD. Supplemental Codebook for the Household Survey, Site I, Wave 4. Roberta Allen, Evelyn Casper, Sally Trude. March 1980. 290 pp.

N-1412-HUD. Audit of the Household Survey, Site I, Wave 4. FDG Staff. Forthcoming.

Site II, Baseline

N-1112-HUD. Codebook for the Survey of Tenants and Homeowners, Site II, Baseline. HASE Survey Group. April 1981. (First issued as WN-9651-HUD, April 1977.) 903 pp.

N-1123-HUD. Codebook for the Attitude Module of the Survey of Tenants and Homeowners, Site II, Baseline. Phyllis L. Ellickson, HASE Survey Group. May 1981. (First issued as WN-9802-HUD, November 1977.) 91 pp.

N-1377-HUD. Supplemental Codebook for the Household Survey, Site II, Baseline. Evelyn C. Casper. December 1980. 276 pp.

N-1108-HUD. Audit of the Baseline Survey of Tenants and Homeowners in Site II. John E. Mulford. October 1979. (First issued as WN-9576-HUD, August 1978.) 97 pp.

Site II, Wave 2

N-1139-HUD. Codebook for the Survey of Tenants and Homeowners, Site II, Wave 2. Patricia Boren. May 1981. (First issued as WN-10293-HUD, October 1978.) 1019 pp.

N-1143-HUD. Codebook for the Attitude Module of the Survey of Tenants and Homeowners, Site II, Wave 2. Patricia Boren. May 1981. (First issued as WN-10432-HUD, March 1979.) 145 pp.

N-1378-HUD. Supplemental Codebook for the Household Survey, Site II, Wave 2. Evelyn C. Casper, Roberta Allen. May 1980. 289 pp.

N-1413-HUD. Audit of the Household Survey, Site II, Wave 2. FDG Staff. Forthcoming.

N-1173-HUD. Audit of the Household Attitude Survey, Site II, Wave 2. Marsha Baran. July 1979. 31 pp.

Site II, Wave 3

N-1359-HUD. Codebook for the Household Survey, Site II, Wave 3. Patricia Boren. May 1980. 908 pp.

N-1371-HUD. Codebook for the Attitude Module of the Household Survey, Site II, Wave 3. Patricia Boren. June 1980. 112 pp.

N-1379-HUD. Supplemental Codebook for the Household Survey, Site II, Wave 3. Roberta Allen, Evelyn Casper. July 1980. 286 pp.

N-1414-HUD. Audit of the Household Survey, Site II, Wave 3. FDG Staff. Forthcoming.

Site II, Wave 4

N-1360-HUD. Codebook for the Household Survey, Site II, Wave 4. Patricia Boren, Deborah Wesley. July 1980. 894 pp.

N-1372-HUD. Codebook for the Attitude Module of the Household Survey, Site II, Wave 4. Patricia Boren. August 1980. 111 pp.

N-1380-HUD. Supplemental Codebook for the Household Survey, Site II, Wave 4. Evelyn C. Casper, Roberta Allen. August 1980. 290 pp.

N-1415-HUD. Audit of the Household Survey, Site II, Wave 4. FDG Staff. Forthcoming.

Residential Building Survey

Site I, Baseline

N-1075-HUD. Codebook for the Baseline Survey of Residential Buildings in Site I. Ann W. Wang, Charles W. Noland. March 1981. (First issued as WN-8810-HUD, February 1975.) 85 pp.

N-1078-HUD. Audit Report for the Baseline Survey of Residential Buildings in Site I. Larry A. Day. December 1979. (First issued as WN-8973-HUD, January 1976.) 121 pp.

Site I, Wave 2

N-1191-HUD. Codebook for the Survey of Residential Buildings, Site I, Wave 2. Patricia Boren. August 1979. 212 pp.

N-1389-HUD. Supplemental Codebook for the Survey of Residential Buildings, Site I, Wave 2. Sally Trude, Patricia Boren, Beverly Lowe. January 1980. 136 pp.

N-1404-HUD. Audit of the Survey of Residential Buildings, Site I, Wave 2. Beverly F. Lowe. May 1981. 77 pp.

Site I, Wave 3

N-1405-HUD. Codebook for the Survey of Residential Buildings, Site I, Wave 3. Patricia Boren. March 1980. 161 pp.

N-1390-HUD. Supplemental Codebook for the Survey of Residential Buildings, Site I, Wave 3. Patricia Boren, Sally Trude. March 1980. 136 pp.

N-1406-HUD. Audit of the Survey of Residential Buildings, Site I, Wave 3. Sandra S. Figge. May 1981. 29 pp.

Site I, Wave 4

N-1354-HUD. Codebook for the Survey of Residential Buildings, Site I, Wave 4. Patricia Boren. March 1980. 279 pp.

N-1391-HUD. Supplemental Codebook for the Survey of Residential Buildings, Site I, Wave 4. Patricia Boren, Sally Trude. March 1980. 147 pp.

N-1474-HUD. Audit of the Survey of Residential Buildings, Site I, Wave 4. Sandra S. Figge. Forthcoming.

Site II, Baseline

N-1126-HUD. Codebook for the Survey of Residential Buildings, Site II, Baseline. HASE Survey Group. May 1981. (First issued as WN-9895-HUD, September 1977.) 181 pp.

N-1392-HUD. Supplemental Codebook for the Baseline Survey of Residential Buildings, Site II. Patricia Boren. November 1980. 115 pp.

N-1120-HUD. Audit of the Baseline Survey of Residential Buildings in Site II. Larry A. Day, Charles W. Noland. October 1979. (First issued as WN-9738-HUD, December 1977.) 92 pp.

Site II, Wave 2

N-1355-HUD. Codebook for the Survey of Residential Buildings, Site II, Wave 2. Patricia Boren. June 1980. 140 pp.

N-1393-HUD. Supplemental Codebook for the Survey of Residential Buildings, Site II, Wave 2. Patricia Boren. June 1980. 112 pp.

N-1407-HUD. Audit of the Survey of Residential Buildings, Site II, Wave 2. Sandra S. Figge. Forthcoming.

Site II, Wave 3

N-1356-HUD. Codebook for the Survey of Residential Buildings, Site II, Wave 3. Patricia Boren. July 1980. 234 pp.

N-1394-HUD. Supplemental Codebook for the Survey of Residential Buildings, Site II, Wave 3. Patricia Boren. June 1980. 129 pp.

N-1408-HUD. Audit of the Survey of Residential Buildings, Site II, Wave 3. Sandra S. Figge. Forthcoming.

Site II, Wave 4

N-1357-HUD. Codebook for the Survey of Residential Buildings, Site II, Wave 4. Patricia Boren, Deborah Wesley. August 1980. 274 pp.

N-1395-HUD. Supplemental Codebook for the Survey of Residential Buildings, Site II, Wave 4. Patricia Boren. August 1980. 145 pp.

N-1409-HUD. Audit of the Survey of Residential Buildings, Site II, Wave 4. Sandra S. Figge. Forthcoming.

Neighborhood Survey

Site I, Baseline

N-1076-HUD. Codebook for the Survey of Neighborhoods, Site I, Baseline. HASE Survey Group. March 1981. (First issued as WN-8811-HUD, June 1977.) 167 pp.

N-1590-HUD. Supplemental Codebook for the Baseline Survey of Neighborhoods, Site I. Carol Hillestad. December 1980. 66 pp.

N-1115-HUD. Audit of the Baseline Neighborhood Survey in Site I. C. Lance Barnett. October 1979. (First issued as WD-9732-HUD, April 1977.) 41 pp.

Site I, Wave 4

N-1361-HUD. Codebook for the Survey of Neighborhoods, Site I, Wave 4. Patricia Boren, Carol Hillestad. March 1980. 207 pp.

N-1282-HUD. Audit of the Neighborhood Survey Site I, Wave 4. Carol E. Hillestad. November 1979. 53 pp.

Site II, Baseline

N-1128-HUD. Codebook for the Survey of Neighborhoods, Site II, Baseline. HASE Survey Group. April 1981. (First issued as WN-9949-HUD, December 1977.) 183 pp.

N-1596-HUD. Supplemental Codebook for the Baseline Survey of Neighborhoods, Site II. Carol Hillestad. December 1980. 38 pp.

N-1113-HUD. Audit of the Baseline Neighborhood Survey in Site II. John E. Bala. October 1979. (First issued as WN-9709-HUD, September 1977.) 55 pp.

Site II, Wave 4

N-1362-HUD. Codebook for the Survey of Neighborhoods, Site II, Wave 4. Patricia Boren, Carol Hillestad. August 1980. 202 pp.

N-1416-HUD. Audit of the Survey of Neighborhoods, Site II, Wave 4. Carol E. Hillestad. August 1980. 48 pp.

Documentation Support

N-1050-HUD. Compensating for Landlord Nonresponse in the Housing Assistance Supply Experiment. Adele R. Palmer. December 1980. (First issued as WN-8268-HUD, June 1973.) 75 pp.

N-1063-HUD. Baseline Audit Plan. Leonard Chesler and others. February 1981. (First issued as WN-8612-HUD, February 1974.) 143 pp.

N-1096-HUD. A Plan for Analyzing Nonresponse Bias: Survey of Landlords, Baseline, Site I. C. Peter Rydell, Richard E. Stanton. April 1981. (First issued as WN-9211-HUD, August 1975.) 57 pp.

N-1131-HUD. HAMISH Update System: Input Form Specifications. Zahava B. Doering, Susan Welt. May 1981. (First issued as WN-10029-HUD, January 1978.) 169 pp.

N-1132-HUD. Sample Maintenance Office Procedures Manual. Susan Welt. May 1981. (First issued as WN-10039-HUD, January 1979.) 357 pp.

N-1133-HUD. HAMISH Survey Support System: Technical Description. Zahava B. Doering, Susan Welt. May 1981. (First issued as WN-10057-HUD, May 1978.) 207 pp.

N-1136-HUD. Using Weights to Estimate Population Parameters from Survey Records. Daniel A. Relles. May 1981. (First issued as WN-10095-HUD, April 1978.) 63 pp.

N-1138-HUD. Completing the Supply Experiment. HASE Staff. May 1981. (First issued as WN-10223-HUD, June 1978.) 131 pp.

The survey codebooks define each variable, identify the corresponding survey question, and display response distributions. The 67 survey codebooks are of three types. Attitude-module codebooks document data gathered in the landlord and household surveys on respondents' attitudes toward the allowance program. The main-survey codebooks document the data gathered in the rest of the survey instrument. Supplemental codebooks document a set of analytic variables derived from original survey variables and added to the files. Most files are represented by a main-survey and a supplemental codebook; most landlord and household survey files are also represented by attitude-module codebooks.

As developed in N-1063 and carried out for the baseline survey files, the survey audit involved the following tasks:

1. A detailed review of fieldwork and interviewer performance.
2. Accounting for the survey sample by explaining adjustments to the HASE panel and determining whether all desired interviews or observations were completed.
3. Accounting for errors, inconsistencies, and missing data, and checking reasons for their occurrence.

4. Assessing potential biases and devising weights so that the records used in analysis collectively represent the sampled population.[5]

Background for the audit procedures in task 1 is given in N-1131, N-1132, and N-1133. N-1132 also provides a detailed description of basic sample accounting procedures. N-1050, N-1096, and N-1136 provide the theoretical underpinnings for task 4.

Wave 2 audits dispensed with task 1 and some of the details pertaining to response consistency in task 3, following the amended audit guidelines in N-1138.[6] The scope of the audits for waves 3 and 4 was further reduced so that task 3 consisted of a description of the data-quality checks, minus their results. The conditions under which the later surveys were conducted resembled wave 2 so closely that we judged their data quality to be consistent with that of the wave 2 files.[7] Special audit procedures developed for attitude data are reported separately for the Site II, wave 2 landlord and household files. For the other landlord and household survey files, the attitude data audits are incorporated in the regular survey audit reports.

DATA MANAGEMENT

N-1029-HUD. Data Management System: Part I, Fieldwork Data and Data Transfer Specifications. G. Levitt. July 1980. (First issued as WN-7885-HUD, July 1972.) 15 pp.

N-1034-HUD. Data Management System: Part II, The Management of Data for Analysis. G. Levitt. February 1981. (First issued as WN-7953-HUD, August 1972.) 29 pp.

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[5] This portion of the audit did not apply to the neighborhood survey, which was addressed to the entire county, not a sample.

[6] The exception is the audit report for the Site II, wave 2 residential building survey, which was addressed to such a small sample that task 3 was confined to a description of error checks.

[7] Weights were not calculated and task 4 was omitted from the following audits for the survey of residential buildings: Site I, wave 3; Site II, waves 2 and 3. Those surveys were administered to a small portion of the HASE sample, which cannot be made to represent the population of interest--all residential buildings in the county.

N-1042-HUD. Data Management System for the Housing Assistance Supply Experiment. C. M. Dodd, M. C. Fujisaki, G. Levitt. July 1980. (First issued as WN-8054-HUD, November 1972.) 51 pp.

N-1062-HUD. Baseline Data Systems Design, Implementation, and Operation Report. Gerald Levitt (ed.). May 1981. (First issued as WN-8611-HUD, March 1974.) 179 pp.

N-1098-HUD. HASE Data Systems: The HASE Audit and Analysis Support Package (HAASP). Eric Harslem, Michael Rogson. May 1981. (First issued as WN-9292-HUD, November 1975.) 63 pp.

N-1131-HUD. HAMISH Update System: Input Form Specifications. Zahava B. Doering, Susan Welt. May 1981. (First issued as WN-10029-HUD, January 1978.) 169 pp.

N-1132-HUD. Sample Maintenance Office Procedures Manual. Susan Welt. May 1981. (First issued as WN-10039-HUD, January 1979.) 357 pp.

N-1133-HUD. HAMISH Survey Support System: Technical Description. Zahava B. Doering, Susan Welt. May 1981. (First issued as WN-10057-HUD, May 1978.) 207 pp.

P-5494-1. Documentation in Social Science Experiments. Michael M. Rogson. January 1976. 19 pp.

Preliminary specifications for managing the data collected in both the surveys and the program are presented in two parts: field collection and transfer to Rand (N-1029) and preparing the data for analysis (N-1034). Those design specifications are developed further in N-1042. The actual system used for data entry and reduction is described in N-1062. Audit and analytic procedures were carried out using the software and data systems described in N-1098. One of those systems, HAMISH, is documented in detail because of its crucial role in keeping track of the survey sample. N-1133 describes how HAMISH supported survey fieldwork. N-1132 details all procedures used in accounting for the survey sample. Instructions for coding HAMISH update forms are given in N-1131.

Although a few of its specific suggestions were not adopted, P-5494-1 sets forth the general philosophy governing data management and documentation in the Supply Experiment.