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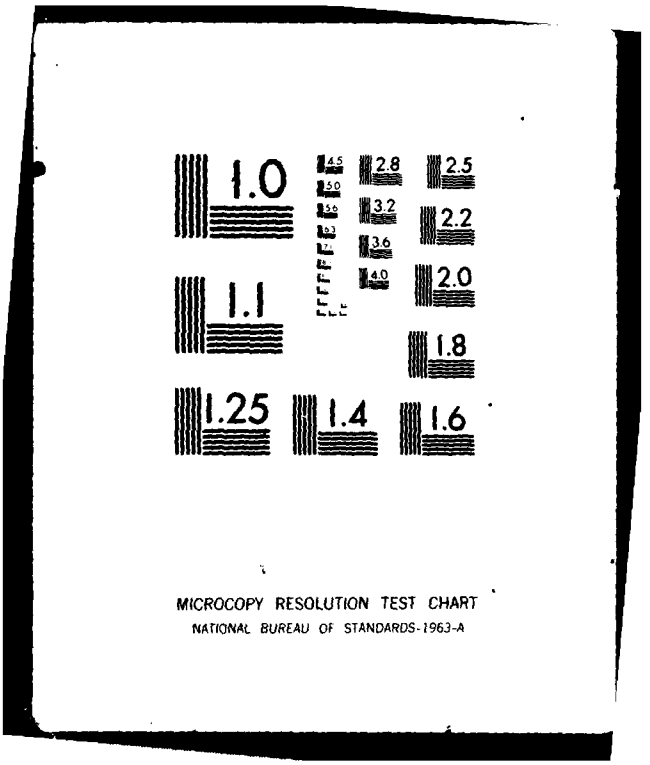
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HOUSING SEARCH AND CONSUMPTION ADJUSTMENT

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April 1980

P-6473

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(6) HOUSING SEARCH AND CONSUMPTION ADJUSTMENT

(10) Kevin/McCarthy

(14) D/P-6477

The Rand Corporation, Santa Monica, California

(11) April 1980

This paper was prepared for the annual meeting of the Population Association of America in Denver, Colorado, 10-11 April 1980, and for the Association of American Geographers, Louisville, Kentucky, 14-16 April 1980.

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HOUSING SEARCH AND CONSUMPTION ADJUSTMENT

INTRODUCTION

Efforts to comprehend spatial mobility have long been marked by the narrowness of particular disciplinary approaches, each attempting to simplify what is in fact a complex and multifaceted decision process. One aspect of that simplification has been the practice of regarding local residential mobility and migration, both of which entail spatial relocation, as fundamentally alike. The practice is conceptually convenient, but may produce more illusion than insight if it obscures the fundamental behavior differences between these two superficially similar processes. Typically, local residential mobility is a consumption-related form of behavior by which people adjust their housing to their changing needs; migration has to do with the pursuit of economic opportunity, centering on employment and earnings. In one sense, the decisionmaking process that culminates in a local move has more in common with the process of purchasing an automobile than with the process of migrating to another labor market.

Traditionally, mobility models have focused on migration rather than residential mobility, despite fundamental differences in the dynamics of each. The most fully articulated migration models, for example, are restricted to labor mobility and view migrants as investors in their own human capital who move in anticipation of benefits to be reaped at their new destinations (Da Vanzo, 1977; Greenwood, 1975). Recently, several explicit models of residential mobility have appeared in the literature (Speare et al., 1975; Hanushek and Quigley, 1978; Brummell, 1979). Although differing on specifics, these models share certain common features: (1) a behavioral approach, focusing on the separate influences of the decisionmaking process; (2) recognition (implicitly) of mobility as a mechanism of consumption adjustment, with inclusion of measures of current housing consumption as key elements in that decisionmaking process; and (3) a focus on the decision to move per se, typically ignoring the type of consumption adjustment that moving produces.

Although these models offer insights into residential mobility, they rarely examine in any detail the "consumer behavior" that is entailed, that is, how households go about trying to find a new residence and why. This may be a significant omission, because moving is a complex process entailing a series of decisions, not a single decision or behavior. Those decisions, which need not be present in every case, include the decision to consider moving, the decision to undertake an active search, and the decisions of whether and where to move. (Rossi, 1955; Brown and Moore, 1970). Because the search stage intervenes between the decision to consider moving and the actual move, the characteristics of the search are likely to be central in determining whether households are able to make their desired adjustment when they move. Indeed, insofar as the determinants of the separate stages differ, an understanding of the search process is essential to a complete analysis of moving behavior (Wolpert, 1965).

Prior studies acknowledge the importance of the search process, but fail to focus on it satisfactorily. Such studies divide into two types: formal models of the decision to move (Speare et al., 1975; Hanushek and Quigley, 1978) that recognize housing search as a transaction cost but rarely examine search behavior; and descriptive studies of search activity (Barresi, 1968; Hampel, 1969a and 1969b; Barrett, 1973) that lack a satisfactory theoretical structure for assessing how search affects mobility. As a result, too little is understood about how households' moving decisions are shaped by the perceived benefits and costs of moving, how households' uncertainty about those benefits and costs influences their decision to undertake an active search, or how various search costs affect moving behavior.

Despite this lack of information, several recent empirical studies (Abt, 1977; Newman and Duncan, 1979; McCarthy, 1979) and at least one theoretical paper (Smith et al., 1979) have suggested that the costs of searching and relocating--that is, the time, effort, and monetary costs involved in locating and moving to a new residence--are substantial and can significantly affect moving behavior. For example, one set of investigators, commenting on the apparent failure of the Experimental Housing Allowance Program to increase recipients'

mobility, concluded that the allowance payments were insufficient to overcome the constraints on low-income households' mobility that are built into the operation of the housing market (Abt, 1977). Without a systematic analysis, however, it is impossible to determine how the costs of housing search affect households' moving behavior.

In addition to its substantive importance, a comprehensive analysis of housing search would be directly relevant to public policy. For example, in designing programs to remedy the housing problems of low-income households, the federal government has traditionally relied on a supply-side strategy in which benefits are tied to subsidized units that eligible households must occupy to receive assistance. Considerations of costs and locational flexibility have recently prompted policymakers to consider demand-oriented alternatives in which assistance would be given directly to recipients who, using the subsidy to supplement their income, could then afford safe, sanitary, and decent housing in neighborhoods of their choice.* The potential success of a demand program is predicated on the assumption that given adequate resources, low-income households will be able to negotiate successfully for themselves in the open market. If, however, beyond the obvious constraints imposed by their low incomes, poor households face other less fully recognized constraints that hamper their ability to search for better accommodations, demand subsidies alone are unlikely to have a significant effect on low-income households' housing consumption.

This paper has two principal functions: First, to introduce a model for analyzing the effects of search on moving behavior; second, to present results suggesting how search procedures can affect moving behavior. Because the research from which these results are drawn is in its early stages, these results are not intended as tests of the underlying model; rather, they are designed to provide evidence on

*The cost-differential between supply and demand programs stems from the former emphasis on new construction versus the latter's on maintaining existing structures. The difference in locational flexibility is a necessary by-product of the fact that one ties subsidies to units and the other to recipients.

two assumptions underlying this analysis: First, that different households use different search strategies; second, that those search strategies can affect residential mobility outcomes. The next section, introducing the theoretical framework, begins with a discussion of the concepts underlying the model, compares this framework with others in the literature, and presents a three-stage search model. The following section describes the data base and presents some preliminary results. The final section summarizes those results and their implications for both substantive and policy issues.

THEORETICAL FRAMEWORK

Our underlying conceptual model of the mobility process shares certain characteristics with recent behavioral models of mobility, but extends them by emphasizing transaction costs and how they impinge on moving behavior. This section describes the model, beginning with a statement of its conceptual underpinnings and how they compare with those of other approaches. We then introduce the three-stage search model.

Underlying Assumptions

Several assumptions about the residential mobility process underlie the search model used here. These assumptions relate to: (1) the household's efforts to adjust its consumption of housing, (2) its position vis-a-vis a hypothetical equilibrium between actual and desired housing circumstances, (3) the search costs a household is willing to absorb, and (4) the separate decisions which, in sequence, culminate in a move.

With respect to the first assumption, we regard most local moves as motivated by a household's desire to adjust its housing consumption. The spatial aspect of this adjustment (which tends to be our focus as demographers) is incidental to this adjustment: What the household is doing, we contend, relates first and foremost to housing. Whether or not this adjustment entails moving depends on how the household decision unit perceives the totality of benefits and costs associated with moving. Households implicitly weigh the two sets of

factors and move only when it seems advantageous to do so. Benefits here include the housing and neighborhood improvements that may be realized by moving, such as more space or a safer neighborhood. Costs include those required to find alternative housing and then to change residences. Specific search costs may include direct expenses (for example, commissions paid to agents), the effort spent trying to find a unit, and any psyhological costs resulting from encounters with discrimination due to race, income, family circumstances, and the like.

Our second assumption posits the notion of equilibrium. The benefits of moving, and thus the likelihood that a household will contemplate moving, will depend partly on how distant the household is from (or close to) some hypothetical state of equilibrium between its desired and actual housing circumstances. Depending on that balance, households may seek to improve the fit between what they have and what they need, either by increasing or reducing their level of consumption. For example, a young couple expecting a child may need another bedroom, whereas an older couple whose children have left home may find they are consuming and paying for more than they need.

With respect to search costs, because households never have perfect information with which to make their housing choices, they typically search out alternatives. How they conduct this search occupies a central place in our conceptual framework. Specifically, we assume that the household embarks on a search without knowing how much searching will be necessary or even whether it will prove sufficiently fruitful to justify the effort. We further assume that events experienced during the search, particularly discrimination, may force households to revise their original expectations, modify their moving goals, or even to terminate their search and postpone moving. The search costs that a household is willing to absorb will depend on the benefits it expects to receive and how long it expects to receive them.

Finally, this framework explicitly assumes that residential mobility typically entails a series of analytically separate decisions or behaviors, including the decision to consider moving, the

decision to undertake an active search, and the decision of whether and where to move. By explicitly recognizing that more than one decision is involved in the mobility process, this approach also acknowledges that there is more than one behavior to explain and that the determinants of each behavior need not be the same. This final point is especially important, because many analysts have restricted their focus to the single variable--whether households actually move. However, if a particular variable is relevant to only one stage of the residential mobility process, an approach based on a single dependent variable is likely to obscure the importance of that factor to the entire mobility process.*

In its general outline, this framework closely resembles those of most other mobility models. For example, most models, acknowledging the reasons prior research has demonstrated that households report for moving, (Morgan, 1972; Bureau of Census, 1966) agree that residential mobility is primarily consumption-related. Similarly, most models contain some notion of benefits and costs, assume that households will consider moving when they believe some other residence offers greater benefits than their current unit, and will decide to move when the expected benefits of moving exceed its costs.

Of course, the terminology used to refer to benefits and costs, as well as how they are measured, often differs considerably (Quigley and Weinberg, 1977). Economists, for example, refer to benefits in terms of the household's expected gain in utility, which they typically measure in terms of income-equivalent gain that households can expect to receive by bringing their actual consumption into closer balance with their "equilibrium" level of consumption. Moving costs are also measured in dollars by summing direct dollar expenditures and an estimated income-equivalent value (the opportunity costs) of the time and effort expended in searching for a new unit (Abt, 1978; Hanushek and Quigley, 1978; Cronin, 1978).

Geographers refer to residential stress and resistance to moving rather than benefits and costs. Residential stress refers to the pressure to move arising from a household's dissatisfaction with its

*An example of this problem can be seen in Cronin (1968).

residence. Stress is measured in terms of the household's evaluation of various attributes of its unit and location, or what is referred to as the household's experienced place utility. The difference between experienced place utility and aspiration place utility, or the amount of stress that is relieved by moving, defines the benefits of the move (Brummel, 1979). Mobility resistance (moving costs) is less well defined, but unlike costs in the economic model, include both monetary and nonmonetary elements; for example, both direct relocation expenditures and the emotional costs of breaking ties to prior residences (see Wolpert, 1965; Brown and Moore, 1970; Huff and Clark, 1978; Smith et al., 1979).

Sociologists refer to residential satisfaction rather than utility or residential stress, and assume that the benefits to be gained are reflected in the increased satisfaction that results from moving. Measures of a household's expected benefits are obtained by asking respondents how satisfied (or dissatisfied) they are with their current residence and whether they plan to move. Like geographers, sociologists have not clearly delineated the costs of moving, but agree that they are important and include both monetary and nonmonetary factors (see Rossi, 1955; Speare, 1974; Speare et al., 1975).

Although neither the geographic nor the sociological models of mobility contain a direct equivalent of the economists' notion of equilibrium, both assume that households implicitly weigh their level of residential stress or dissatisfaction against some intuitively recognized threshold or aspiration level in deciding whether to move. When the level of either stress of dissatisfaction exceeds the threshold, the probability of moving increases. Since a household's threshold or aspiration level, like the economists' notion of equilibrium consumption, is assumed to be determined by household characteristics, the household's level of stress or dissatisfaction relative to its threshold operates in essentially the same way as the economists' notion of disequilibrium.

Finally, each of the approaches discussed here recognizes that a household's decision to move, based as it is on an evaluation of relative benefits and costs, is only the final stage of a complex

process. However, unlike the model presented here, only some of those models incorporate all of those stages and few, if any, analyze how the process itself affects the housing adjustments that movers make. Often, such models examine only whether a move occurs (Hanushek and Quigley, 1978; Weinberg, 1979), although some also consider the decision to search either directly (Cronin, 1978; Abt, 1978) or indirectly by analyzing moving plans (Speare et al., 1975; Goodman, 1976). Both approaches run the risk of misspecifying the effect of a particular variable that influences only one stage of the process and miss the opportunity to identify how the process itself shapes the eventual outcome. Thus, it may be difficult with such models to explain why some households who are dissatisfied with their current housing do not search, why some households who search do not move, or how events experienced during the mobility process, such as discrimination, affect its outcomes.

A Three-Stage Search Model

While incorporating elements from other mobility models, the approach used here avoids many of their problems by employing what might be called a three-stage search model. This model is designed to explain which households search, what procedures they use, and how these search procedures influence moving behavior.*

The first stage estimates the probability that a household will conduct an active search as a function of its current housing circumstances, h_i, its demographic and economic characteristics, g_i, and its prior market knowledge, k_i:

$$(P(S) = f(h_i, g_i, k_i) \qquad (1)$$

*By focusing on moving among searchers rather than among all households, this approach necessarily loses total closure on mobility, since not all households search before moving. This exclusion is purposeful. This research focuses on how the search process affects moving behavior. It would clearly be inappropriate to include "windfall" movers--those who did not search.

The benefits of moving are introduced into this model through the housing circumstance variables (h_i), which will include both objective conditions and subjective rating measures. Although other models have used this procedure, our approach differs by using several indices of housing circumstances. There are several reasons for this decision. First, multiple measures avoid the problems of a single predicted benefit measure.* Second, this approach enables us to determine if the stimulus to move varies across different housing dimensions. Third, we assume that before a household actually searches, the best indicator of whether it could benefit from moving is its current housing circumstances (see Atkinson and Weinberg, 1979).

The household characteristic variables (g_i) reflect the conditioning effect those factors can have on the probability that a household will search. For example, a household's characteristics indicate the stability of its housing need, the likely costs of searching and moving to a new residence, and the circumstances prompting the decision to search.

Finally, measures of a household's prior market knowledge (k_i) are included because we assume that a household's need to conduct an active search will depend upon its prior familiarity with the alternatives available in the market. Prior research offers some support for this assumption by indicating that between 10 and 25 percent of all movers claim to have made their decisions without engaging in an active search (see Rossi, 1955; Barrett, 1973).

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*Economists, for example, frequently measure the predicted benefits of moving in terms of the difference between the total volume of services that households consume in their current unit and an estimated equilibrium volume of services. The greater this difference, whether positive or negative, the greater the benefits of moving. The equilibrium level of service is estimated in terms of total housing expenditures, net of price discounts, etc., by assuming that expenditures accurately capture the volume of services consumed. However, the utility a household derives from housing is determined not simply by the total volume of services consumed, but also by the specific attributes of the housing bundle. Since housing is a multidimensional good, and different combinations of attributes can command the same price, measures of volume alone can never measure the household's expected utility gain.

With respect to the search procedures used, we assume that when households embark on a search, they are in effect gambling. They can only guess at how much searching will be necessary, and the outcome may not justify their efforts. These uncertainties lead households to adopt widely differing strategies for deciding how much effort to exert and what information sources to use. At one extreme, the costs of searching might be minimized by abstaining from any activity at all--essentially doing nothing more than remaining alert to "windfall" discoveries picked up from information supplied by friends or casual perusal of the market. At the other extreme, a household might maximize its chances of locating the best available alternative by a continuous and thorough search--looking for months and considering dozens of alternatives. Most households fall between these two extremes, of course, or alter their search procedures as they become familiar with what the market has to offer.

Our model assumes that the search strategy households adopt will be influenced by the same three factors that determine whether a household undertakes an active search: (1) current housing circumstances, (2) demographic and economic characteristics, and (3) familiarity with the market. The household's evaluation of its current circumstances will influence the choice of strategy by shaping its expectations about the benefits it can expect from moving and, thus, the search costs it can reasonably afford. Households whose current housing is generally satisfactory, and thus might expect only minimal benefits from moving, may be only "passively alert"; but those that are in substantial disequilibrium can be expected to search actively.

A household's characteristics will influence the type of unit it seeks and, correspondingly, the procedures it adopts to look for one. The costs of using alternative search methods will also vary with a household's characteristics, and thus will affect the likelihood that such methods will be adopted. For example, for some households, age or employment circumstances raise the costs of their personally examining alternatives, while others may find that their best strategy is to rely primarily on their own efforts. Circumstances

affecting how long a household expects to remain in its unit or whether it can expect to encounter discrimination may also affect the effort it is willing to exert to find a suitable residence.

A household's previous familiarity with the market should also influence its search strategy. Most households, since they enter the market infrequently, are unfamiliar with the options available. They must first explore the market to establish criteria for choosing a new unit and then locate and rank alternatives (Silk, 1971). Some households, however, have recently searched for housing, and their prior experience should reduce the effort they must expend to locate an acceptable unit.

Unlike the decision to conduct an active search, search strategies will also be influenced by the difficulties households encounter during their search. Such problems may cause a household to alter its strategy or even abandon its plans to move altogether. For the most part, these problems are of the type consumers generally face when they enter a market and can be attributed to such things as inadequate market knowledge, limited supply, etc. However, some households face special difficulties in their search because they are discriminated against in the market. Whether due to race, income, or family circumstances, discrimination increases a household's search costs by subjecting it to humiliation or hostility and forcing it to expend more effort to find a suitable residence.

The effects of discrimination on search costs can be estimated through a two-step procedure. The first step entails estimating a regression equation in which a measure of search effort, such as the number of units examined, is regressed on the basic determinants of search procedures, that is, current housing circumstances, household characteristics and familiarity with the market. The second step entails reestimating the equation with the discrimination variables included.* Their coefficients will indicate how each type of dis-

*Since the policy significance of different types of discrimination could vary (e.g., racial discrimination vs. discrimination against pets), variables identifying separate types of discrimination will be used. The data enable us to identify eight different sources

crimination affects the number of units examined. Comparing the coefficients of the nondiscrimination variables between the two equations should, in turn, indicate whether any part of the differences observed in the first equation are due to the differential effects of discrimination. Finally, a comparison of the explanatory power of the two equations will indicate how much of the actual difference in search behavior is attributable to background factors and how much is due to discrimination.

The final stage of the model estimates how relocation and search costs affect the type of adjustments households make when they move. In this stage, the characteristics of the consumption adjustment made, are assumed to be a function of a household's characteristics (including the changes in characteristics that may have precipitated the move), g_i, search and relocation costs, c_i, and the search procedures used, sp_i.

$$(H_{il} - H_{io}) = h(g_i, c_i, sp_i) \qquad (2)$$

where $H_{il} - H_{io}$ = characteristics of origin and destination units occupied by household i.

Although represented here as a difference in characteristics between pre and postmove units, several dimensions of the adjustment that households make when they move could be examined, including: total change in consumption, change in major components of the housing bundle, and whether households obtain bargains when they move.* These adjustments should be determined principally by such

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of discrimination: age, sex, marital status, race, nationality, source of income, children, and pets.

*Measuring consumption changes is a difficult task, of course, since housing is a multidimensional good whose attributes are combined in discrete bundles. Moreover, although changes in specific attributes can be observed directly, e.g., the presence of screens or number of rooms, no single attribute can be used to summarize dwelling-unit or neighborhood quality. Fortunately, hedonic indices ease these problems by placing a dollar value on the various attributes of the housing bundle based on their contribution to total rent. Using the coefficients of the hedonic equation and the descrip-

factors as the changes in household characteristics that precipitated the move. However, a variety of moving costs, including discrimination and the effort needed to find a unit, may force households to modify the nature of the adjustment they make. Similarly, some search techniques may be more effective than others. Consequently, the model includes variables identifying both of these factors.**

The results obtained in this final stage can indicate several things. First, they will identify the importance of individual household variables as they affect consumption change. Second, they will show how individual moving costs modify the type of adjustments that households make when they move. Third, by running the model in two stages, first excluding and then including the cost and search variables, and comparing the difference in explained sums of squares, one can estimate the relative importance of the household and the search variables in explaining consumption adjustment.

This three-stage search model has several advantages over prior models for analyzing how search and relocation costs influence moving behavior. First, the model explicitly recognizes that the cost of moving can affect mobility behavior in a variety of ways and allows us to test for such alternative effects. Second, this approach facilitates a comparison of the effects of individual cost items, such as search effort versus discrimination, on moving behavior. Finally, it provides direct policy leverage by identifying how specific search costs can affect different aspects of the consumption adjustment process.

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tions of the characteristics of old and new residences, we can estimate both the overall change in housing consumption and the change in each major dimension of the housing bundle.

**In addition to analyzing changes in adjustments among movers, this framework can also be used to study whether search costs dissuade searchers from moving. The model used for this purpose would also include a measure of potential benefits, i.e., the h_i's, and in complete form would be $P(M/S) = g(h_i, c_i, g_i, sp_i)$, where $P(M/S)$ = probability of moving, given search. Although we will estimate this model, it is not included here, since, given the potentially significant costs of searching, it seems unlikely that households would abandon their search altogether and receive no return on their investment. Rather, such households are more likely to postpone their mobility decision.

SEARCH STRATEGIES AND THEIR OUTCOMES--PRELIMINARY RESULTS

Because the research currently under way to test the three-stage search model is still in its early stages, we cannot yet provide a definitive test of the model. However, our preliminary work, focusing on search techniques and how they affect moving outcomes among low-income renters, demonstrates how this approach can contribute to our general understanding of mobility and to specific policy issues.

Data and Methods

The data used in this analysis were gathered in baseline surveys of tenants and homeowners in two midwestern housing markets: Brown County, Wisconsin, whose central city is Green Bay, and St. Joseph County, Indiana, whose central city is South Bend. These surveys were conducted as part of the Housing Assistance Supply Experiment (HASE), a multiyear social experiment conducted by The Rand Corporation under the sponsorship of the Department of Housing and Urban Development. HASE was designed to test the marketwide effects of a full-scale housing allowance program on two metropolitan housing markets.*

Two characteristics of these data files make them uniquely well suited to this research. First, they provide a remarkable depth of information on households, their housing circumstances, and their search and moving behavior. As a result, the HASE data permit extensive comparisons of households and their housing circumstances in their pre and postmove residences and thus remove the data barriers that have hampered prior analysis of moving behavior. Second, the HASE data provide complete coverage of two separate metropolitan housing markets. Therefore, unlike other data files, which typically supply either a thin sample of households from many separate markets or a dense sample of one subpopulation in a particular market, the HASE data facilitate detailed comparisons among all market sectors.

The comparisons reported here are restricted to a selected sample of households in the two survey files. This sample includes

*A complete description of the Supply Experiment can be found in the Third Annual Report of the Housing Assistance Supply Experiment (1977).

only renters living in regular units (houses and apartments) who moved into their residences from other units within the same site in the five years preceding the interview. The analysis therefore excludes all homeowners, all in-migrants to each site, all occupants of irregular units (mobile homes and rooming houses), and all nonmovers, including those who may have searched for a unit but did not move.*

During this analysis, two data problems arose that deserve mention here. First, like most surveys, ours faced the problem of missing data, particularly on income items. Consequently, the results reported here pertain only to records that, in addition to meeting other sample requirements, had complete income information. Second, reflecting lessons learned from the survey experience in the first site, survey procedures were changed somewhat for the other site. Consequently, results for the two are not always strictly comparable.

The analysis reported here often focuses on differences among low-, moderate-, and high-income households. These three mutually exclusive categories are defined in terms of a household's eligibility for the allowance program, which is calculated on the difference between one-quarter of a household's adjusted gross income (.25YAG) and what we estimate to be the standard cost of adequate housing, R*, for a houshold of its size. Adjusted gross income

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*The rationales for these exclusions vary. Homeowners were excluded because our analysis focuses on how search costs inhibit the moving behavior of low-income households. Since low-income owners are far more likely to repair or improve their current residences than to move to new ones, they are of less direct concern here. In-migrants were excluded because few migrants move for housing reasons, the type of move in which we are interested here. Occupants of irregular units were excluded because they constitute a small and relatively select group of households whose housing circumstances differ substantially from those of other households. Nonmovers were excluded because the baseline surveys contain no information on their search behavior.

has a clear advantage over total household income because it controls for differences in household size and extraordinary expenses in calculating a household's purchasing power.* The three income (eligibility) categories are defined as follows:

Low income (eligible).....	.25YAG < R*
Moderate income (nearly eligible)....	R* < .25YAG < 1.5R*
High income (clearly ineligible).....	.25YAG > 1.5R*

The comparisons reported here use both weighted and unweighted results. In general, where the comparison involved regression analysis, the results are left unweighted; where the results represent a simple cross-tabulation on average, they are weighted. When weighted, the results refer only to the analysis population--not the total population in either site. In all cases, tables are footnoted to inform the reader what weighted procedure was used.

Finally, standard tests for statistical differences are not reported here. There are two reasons for this omission. First, the data are drawn from a stratified cluster sample, and calculating accurate variances for population estimates from such samples involves a complex and costly procedure. Second, the results reported here are preliminary and intended to be suggestive rather than conclusive. We therefore decided that the costs would not be justified for the current analysis. However, statistical tests for differences for the income comparisons have been made; the results can be found in McCarthy (1979).

Comparison of Search Strategies

Households adopt search strategies to reduce their uncertainty about the costs and benefits of alternative actions. The strategies necessarily include decisions about what information sources to consult and how much effort to expend, decisions that can influence the

*Adjusted gross income excludes 5 percent of gross income (10 percent if either head is over 61) and $300 annually for each dependent. Other deductions are allowed for work-related, childcare, or extraordinary medical expenses.

type of housing adjustment that is made. A household's initial plans may change, of course, because of information gathered during the search; and households may stop searching if they judge the costs of continued search to outweigh the benefits of moving.

An important unresolved issue for federal housing policy is the degree to which the housing search process impedes the overall effectiveness of mobility as an avenue through which low-income households can improve their housing. In the comparisons presented below, we focus on two policy-relevant groups--low-income households and minorities--and test hypotheses developed from our paradigm about four aspects of search behavior: (1) how search procedures differ; (2) how the frequency of discrimination differs; (3) how discrimination affects the search effort; and (4) how search procedures affect the searcher's ability to find bargains.

Although all households must factor transaction costs into their mobility decisions, we hypothesize that such costs are likely to represent an especially severe constraint to low-income households. There are several reasons for this assumption. First, lower incomes and tighter budgets reduce households' ability to absorb a given level of transaction costs. Second, low-income households are especially vulnerable to household, employment, and income changes that increase the likelihood that they will soon move again and shorten the period over which they might expect to amortize their search costs. Third, low-income searchers can generally expect to experience more discrimination than other searchers and that, in turn, will increase their search costs. The rationale for this point is developed in the next subsection.

In sum, we expect to find low-income households adopting lower-cost strategies and exerting less search effort than higher-income households.

Although our surveys contain no direct measures of search strategies, they can be gauged in several ways, according to the procedures used in the search. Our focus here is on three measures of the effort expended during the search:

- o The length of that search,
- o The number of units examined, and
- o The number and type of information sources consulted.

Our expectation is that low-income households will exhibit lower values on each of these dimensions. The evidence bearing on this hypothesis is reported in Table 1, which compares selected measures of search effort by income level in the two HASE sites.

Focusing on within-site differences, the data provide little support for the hypothesis that low-income searchers exert less effort than their more affluent counterparts. Despite a slightly greater tendency for low-income searchers to choose the first unit they look at, there are few consistent or significant differences among low-, moderate-, and high-income households in terms of search length, number of units examined, or number and types of information sources used. Instead, it appears that most renters, at all income levels, favor a low-cost search strategy. For example, most renters in both sites spend only about two weeks in the market, look at only two or three units besides the one they finally choose, and rely heavily on information supplied by friends and relatives or advertised vacancies in the newspaper.

Although renters' incomes appear to have little effect on how they look for housing, the strategies that black and white renters employ are likely to differ. The main reason for this assumption is that black searchers are far more likely to encounter discrimination than white searchers. As we have already noted, discrimination shrinks the range of available housing options and can force households to search harder to find an acceptable unit. Moreover, households who anticipate the higher search costs that discrimination entails may be reluctant to undertake an active search unless their expected moving benefits are large enough to offset their higher expected search costs. Thus, black households may need to be more highly motivated than whites before they engage in a search. Some indirect evidence for this position has been provided by McAllister et al. (1971), who found that, among renters, blacks move less fre-

Table 1

COMPARISON OF SEARCH EFFORT AMONG ACTIVE SEARCHERS: RENTER HOUSEHOLDS IN BROWN COUNTY, WISCONSIN, AND ST. JOSEPH COUNTY, INDIANA

	Percentage Distribution by Site and Income Level					
	Brown County			St. Joseph County		
Search Characteristic	Low Income	Moderate Income	High Income	Low Income	Moderate Income	High Income
Length of search						
1 week or less	41.8	40.0	42.0	34.7	36.3	44.0
1-4 weeks	38.4	42.2	42.1	37.2	36.4	31.1
1-3 months	15.6	13.7	14.5	18.7	18.6	20.1
4+ months	4.2	4.1	1.4	9.5	8.8	4.8
Total	100.0	100.0	100.0	100.0	100.0	100.0
Median (days)	12.1	11.3	11.5	16.5	14.5	11.7
Alternatives examined						
1	38.5	37.4	29.0	33.1	24.8	23.3
2-5	33.4	39.8	39.7	46.9	48.8	48.0
6-11	19.5	18.1	23.0	15.8	17.1	23.8
12+	8.6	4.7	8.3	4.2	9.3	4.9
Total	100.0	100.0	100.0	100.0	100.0	100.0
Median	3.31	3.21	4.08	3.33	3.72	4.13
Percent using source						
Friend or relative	71.1	64.1	64.4	86.4	78.9	79.5
Newspaper ad	83.5	88.1	84.7	76.7	81.9	83.8
Looking at properties	39.7	30.1	30.8	50.1	49.7	44.7
Rental agent	26.8	23.1	25.6	26.5	26.0	32.8
Mean no. of sources	2.21	2.06	2.06	2.40	2.36	2.41

Source: Tabulated from records for the baseline survey of households, Sites I and II.

NOTE: Entries are weighted estimates based on a stratified probability sample of 1,454 renter households in Brown County and 1,114 in St. Joseph County who conducted an active housing search and moved in the 5 years preceding the surveys.

quently than whites. Furthermore, a comparison of premove housing circumstances among white and black movers with similar incomes in St. Joseph County reveals that blacks lived in more crowded conditions and had more complaints about unit quality, neighborhood safety, and overall neighborhood condition than did white movers. We therefore hypothesize that blacks will search harder than whites.

The evidence bearing on this hypothesis is presented in Table 2. These results are limited to St. Joseph County, the only experimental site with a significant minority population. The table also categorizes blacks and whites by income level to control for income differences. The data provide considerable support for the hypothesis. Blacks search, on average, twice as long and consult each of the four information sources more frequently than do whites; and low-income blacks examine slightly more units than whites.

While these results confirm our hypothesis about differences in search behavior by race, they offer, at best, only an indirect test of the effects of discrimination on search behavior. Consequently, we now turn to a more direct examination of discrimination and its effects on search behavior.

Discrimination and Housing Search

When households undertake an active housing search, they risk the chance that landlords will refuse to rent to them because of their characteristics. Although landlords may have reason to prefer one class of tenant to another, searchers who encounter discrimination will face higher search costs in the form of the additional effort needed to find housing and the humiliation and resentment they may experience because of such treatment. In particular, we hypothesize that the costs will be higher for low-income than for higher income households, and for blacks more than for whites. We expect income to affect the intensity of discrimination because rightly or wrongly, landlords often attribute low economic status to such groups as racial minorities, single mothers with children, and people who are dependent on public assistance; low-income tenants are less desirable in the view of some landlords. Because racial

Table 2

COMPARISON OF SEARCH EFFORT AMONG WHITE AND BLACK SEARCHERS BY INCOME LEVEL: RENTER HOUSEHOLDS, ST. JOSEPH COUNTY, INDIANA

	Percentage Distribution by Income Level and Race			
	Low Income		Moderate and high income	
Search Characteristic	White	Black	White	Black
Length of search				
1 week or less	37.6	32.1	42.4	31.9
1-4 weeks	37.6	29.2	32.1	40.6
1-3 months	16.3	25.6	19.6	15.1
4+ months	8.5	13.0	5.9	12.4
Total	100.0	100.0	100.0	100.0
Median (days)	14.8	30.2	12.2	28.7
Alternatives examined				
1	33.9	28.8	23.1	27.3
2-5	45.9	51.7	48.5	49.1
6-11	15.4	17.3	21.2	19.9
12+	4.8	2.2	7.2	3.7
Total	100.0	100.0	100.0	100.0
Median	3.30	3.46	4.08	3.22
Percent using source				
Friend or relative	85.1	91.3	79.6	80.1
Newspaper ad	75.6	81.9	82.3	89.8
Looking at properties	46.2	62.3	46.2	50.0
Rental agent	23.9	37.4	28.0	48.4
Mean no. of sources	2.31	2.73	2.36	2.69

Source: Tabulation from the baseline survey of households, Site II.

NOTE: Entries are weighted estimates based on a stratified probability sample of 927 white and 187 black renters who conducted an active search and moved in the 5 years preceding the survey.

discrimination is still common in American society, we expect blacks to be more susceptible than whites.

Discrimination is difficult to measure, of course. Here we use searchers' responses to questions asking whether anyone was reluctant to rent to them because of their age, sex, marital status, race, nationality, or source of income, or because they had children or pets. The term "discrimination" is therefore used here to denote the number of separate types of discrimination encountered, rather than the number of separate incidents.

Table 3 presents the frequency with which all searchers in Brown County, and white and black searchers, respectively, in St. Joseph County, report encountering each of these types of discrimination. The pattern that emerges indicates considerable similarity in perceived discrimination among whites in the two sites, in contrast to a markedly different pattern among blacks. Very few whites in either site report discrimination on the basis of race or nationality; far more troublesome were marital status, source of income, children, and pets. Blacks, in contrast, report higher levels of discrimination than whites from all sources but one (pets), and over 20 percent perceive considerable racial discrimination. Moreover, the 20 percent figure may be an understatement, to the extent that racial discrimination is disguised under the figures reported for other types.

Table 4 presents data on the frequency with which low- and high-income black and white searchers experience discrimination. Since the income-level pattern is the same in both sites, the Brown County results are not included here. Moreover, limitations on the number of high-income black households led us to collapse the moderate- and high-income categories.* These results support both the hypothesis that discrimination is a more severe obstacle to low- than to high-income searchers and the hypothesis that within income classes, blacks experience more discrimination than whites. Among both blacks and whites, low-income searchers are not only more likely to experience discrimination than other searchers, but they also encounter

*Readers interested in the results for Brown County and in the complete income breakdown for St. Joseph County are referred to McCarthy (1979), Table 4.

Table 3

TYPES OF DISCRIMINATION ENCOUNTERED BY ACTIVE SEARCHERS: RENTER HOUSEHOLDS IN BROWN COUNTY, WISCONSIN, AND ST. JOSEPH COUNTY, INDIANA

Type of Discrimination[a]	Frequency of Occurrence (%)		
	Brown County	St. Joseph County	
	All Searchers	White Searchers	Black Searchers
Age	9.2	11.4	13.3
Sex	5.3	5.1	7.8
Marital status	13.1	12.7	17.5
Race	1.2	0.7	20.8
Nationality	0.8	0.6	11.0
Income source	7.6	11.6	20.3
Children	12.2	14.0	22.2
Pets	12.4	20.1	5.6

Source: Tabulations from the baseline surveys of households, Sites I and II.

NOTE: Entries are weighted estimates based on a stratified probability sample of 1,454 renter households in Brown County and 1,114 in St. Joseph County who conducted an active search and moved in the 5 years preceding the survey.

[a]Based on respondents' answers to the question, "While you were searching, was anyone reluctant to rent you a unit because of your (age, marital status, ...)?

Table 4

DISCRIMINATION ENCOUNTERED DURING HOUSING SEARCH: RENTER HOUSEHOLDS
ST. JOSEPH COUNTY, INDIANA

Measure of Discrimination	Low-Income Searchers			Moderate and High-Income Searchers		
	White	Black	Total	White	Black	Total
Searchers experiencing discrimination (%)	69.3	82.2	72.1	55.3	77.1	57.5
Average number of types of discrimination[a]	0.93	1.22	0.99	0.65	1.13	0.69

Source: Tabulations from the baseline survey of households, Site II.

Note: Entries are weighted estimates based on a stratified probability sample of 927 white and 187 black renters who conducted an active search and moved in the 5 years preceding the survey.

[a]Based on respondents' answers to the question, "While you were searching was anyone reluctant to rent you a unit because of your (age, marital status, ...)?

more types of discrimination when they search. Similarly, at each income level, blacks experience more discrimination than whites. Interestingly, moderate- and higher-income black searchers are somewhat more likely to encounter discrimination than low-income whites, suggesting that race is a more powerful determinant of discrimination than income.

In addition to the psychological costs that discrimination exacts, it should also increase the difficulty of finding an acceptable unit, since it effectively narrows the range of available alternatives. Therefore, we expect that searchers who encounter discrimination will be forced to exert more effort than those who do not. The data in Table 5, which compares three measures of search effort among black and white searchers in the two income categories, controlling for the number of types of discrimination encountered, clearly supports this expectation.* For all three indicators of search effort it is apparent that regardless of income level or race, searchers who experience discrimination must search longer, examine more alternatives, and use more information channels than those who do not.** Testifying to the strength of this relationship, each measure of search effort increases monotonically with the number of types of discrimination encountered, with only one exception.

Thus, discrimination increases both the psychological costs of searching and the amount of effort needed to find an acceptable unit. As a result, searchers who encounter discrimination may be forced to modify their moving goals or even abandon their search and postpone moving. Similarly, households who may be considering moving, but expect to encounter discrimination, may decide to postpone their search.

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*Again, readers interested in the Brown County results and the complete income results are referred to McCarthy (1979), Table 5.

**The hypothesis here implicitly assumes that discrimination increases search effort, rather than effort and discrimination being determined jointly. Since an argument can be made for the reverse assumption, we tested for the possibility that the various measures of search effort and the number of types of discrimination encountered might be determined jointly. Those tests indicated that although the various measures of search effort are clearly interrelated, they are not inherently related to the discrimination measure.

Table 5

EFFECTS OF DISCRIMINATION ON THE SEARCH EFFORTS OF ACTIVE SEARCHERS: RENTER HOUSEHOLDS IN ST. JOSEPH COUNTY, INDIANA

Number of Discrimination Problems	Search Effort by Income Level and Race					
	Low-Income Searchers			Moderate- and High-Income Searchers		
	White	Black	Total	White	Black	Total
	Median Search Length (days)					
None	13.1	13.4	13.1	9.3	12.0	9.5
One	18.8	30.3	21.1	14.1	30.1	14.8
More than one	30.2	36.4	30.5	29.0	30.6	30.2
	Median Number of Alternatives Examined					
None	2.48	2.87	2.58	3.74	2.38	3.57
One	3.54	3.79	3.60	4.23	3.26	4.12
More than one	4.92	4.62	4.87	5.63	6.13	5.83
	Average Number of Sources Used					
None	2.08	2.32	2.13	2.17	2.59	2.21
One	2.42	2.89	2.53	2.45	2.97	2.48
More than one	2.73	3.27	2.89	2.95	2.71	2.91

Source: Tabulations from the baseline survey of households, Site II.

NOTE: Entries are weighted estimates based on a stratified probability sample of 927 white and 187 black renters who conducted an active search and moved in the 5 years preceding the survey.

Since discrimination clearly increases search effort, and since the frequency with which renters experience discrimination varies according to their income, the data in Table 5 allow us to reexamine our first hypothesis to see how discrimination affected those results. For example, it is possible that the greater frequency with which low-income searchers experience discrimination may have confounded the earlier comparison of search effort by income level (see Table 1). If discrimination did indeed confound that earlier comparison, then we should find that among households experiencing no discrimination, search effort increases with income.

The pattern reflected in the data is inconclusive. Although low-income searchers examine fewer units and consult fewer information channels, they search longer than do higher-income searchers. Without further evidence, it is safe to say only that discrimination increases search costs and forces many renters who might otherwise pursue a low-cost search strategy to intensify their search efforts.

Search Procedures and Their Outcomes

The significance of differences in search behavior will depend on how search procedures affect the outcomes of the mobility process. There is considerable reason to assume that search behavior should have such an effect because the success of housing choices, like other types of consumer behavior, should depend on the information available to make those choices.

There are, of course, several ways to measure the effects of search procedures on mobility. Here, we look at two: the ability of households to find bargains when they move, and the size of the security deposits they are required to pay in their new residences.* We hypothesize that intensive searchers should succeed in obtaining housing bargains--both in terms of the rent they pay for a given unit and in terms of the size of their security deposits. This hypothesis assumes that intensive housing searches, particularly

*Alternatively, the effects of search procedures on moving outcomes could be evaluated in terms of a household's ability to realize its premove housing objectives, or in terms of the change in the total volume or characteristics of the services it consumes.

those that do not involve discrimination, should provide searchers with a level of market knowledge that enhances their ability to find and recognize bargains. To test this hypothesis, we have regressed our two dependent measures on variables describing the procedures used in the search and on a set of household characteristics.

The first dependent measure, the household's ability to find a bargain, is defined as the difference between the rent actually paid for a given dwelling and the average rent for dwellings with the same attributes. For each searcher's chosen dwelling, we estimate the appropriate average rent by using a hedonic index fitted to the HASE data.* The difference between actual and predicted rent is expressed as a percentage of predicted monthly rent, that is, a monthly rent discount. Positive values indicate that households are paying a premium for their units, and negative values indicate that households are getting a bargain. The second dependent measure, the percentage security deposit, is defined as the sum of all deposits required by landlords expressed as a percentage of initial contract rent.

Seven search variables are used to predict a household's ability to get a bargain: a dummy variable indicating whether a household conducted an active search; the number of units examined during its search; the length of the search; a weighted sum of the information sources used, where the weights are based on the presumed effort involved in their use;** the number of types of discrimination encountered during the search; and two interaction terms designed to identify diametrically opposed search strategies.

Table 6 shows the regression results for the rent discount equations in Brown and St. Joseph Counties. Those results indicate that although search procedures do affect a mover's ability to find a bargain, inside information seems to be more important than search

*A hedonic index consists of a set of housing attributes and associated price coefficients, the latter estimated by regressing rent on attribute values. The coefficients are estimates of the average market price for units of their associated attributes; consequently, multiplying the vector of coefficients by the specified attribute vector of the searcher's chosen dwelling gives the average or "expected" market rent for such a dwelling.

**The weights are as follows: personal contacts = 1, newspapers = 2, driving or walking around = 3, rental agents = 4.

Table 6

RENT DISCOUNT EQUATIONS: RENTER HOUSEHOLDS IN BROWN COUNTY, WISCONSIN AND ST. JOSEPH COUNTY, INDIANA

VARIABLE	POSSIBLE VALUES	BROWN COUNTY		ST. JOSEPH COUNTY	
		Coefficient	Value of t	Coefficient	Value of t
Dependent					
Monthly Rent Discount (%)	Continuous	--	--	--	--
Search					
Constant	--	3.05		3.12	
No Active Search	Yes=1; No=0	-.10	1.62*	-4.08	.97
Units Examined (Ln)	Positive Continuous	.86	1.25	.27	.47
Search Length (Ln)	Positive Continuous	-.27	.78	-.85	1.75*
Sources Used	1-10	.11	.46	-.21	.22
Problems Encountered (Ln)	Positive Continuous	2.88	2.31*	4.17	2.75*
Low Intensity-Friends	Yes=1; No=0	-5.96	3.30*	-4.29	1.53
High Intensity-No Problems	Yes=1; No=0	-1.63	.37	9.80	1.80*
Background					
Local Moves	Positive Continuous	-.38	.71	-.53	.98
Length of Stay (Ln)	Positive Continuous	-.52	1.11	.62	1.02
Head's Years of Schooling	Positive Continuous	.61	2.40*	.32	1.30
Single Male Head	Yes=1; No=0	1.00	.49	1.85	.74
Single Female Head	Yes=1; No=0	.45	.22	-.39	.14
Single Head with Children	Yes=1; No=0	1.16	.41	-8.20	2.45*
Single Person Household	Yes=1; No=0	-5.34	2.76*	-4.73	1.95*
Age of Head					
>21	Yes=1; No=0	-2.59	.94	-.62	.21
21-29	Yes=1; No=0	-6.15	2.98*	1.83	.83
30-39	Yes=1; No=0	-.80	.34	-2.24	.88
60-69	Yes=1; No=0	-2.73	.79	-3.87	.92
70+	Yes=1; No=0	3.61	.81	-3.64	.63
Number of Children	Positive Continuous	.75	1.32	2.77	4.07*
Income Eligible	Yes=1; No=0	-4.71	3.17*	-.75	.42
Near Eligible	Yes=1; No=0	-1.15	.80	-2.30	1.29
Black Household	Yes=1; No=0	--	--	.32	.16
Income Sources (%)					
Welfare	Positive Continuous	.05	1.28	-.02	.44
Pensions & Social Security	Positive Continuous	-.03	.61	-.03	.63
Earnings	Positive Continuous	-.03	.86	-.04	1.30
R^2		.113		.079	
F		4.64		2.91	

Source: Analysis of records from baseline surveys of households, Sites I and II.

NOTE: Regression analyses were performed on records of 933 renters in Brown County and 1,369 in St. Joseph County paying full market rents and moving in the 5 years preceding the survey.

*Coefficient is significantly different from zero at .10 level.

effort. In Brown County, for example, none of the three direct measures of search effort (the number of units examined, search length, and the number of sources used), significantly affect a searcher's ability to find a bargain. Similarly, in St. Joseph County, only one of the three direct search-effort measures--search length--has the expected effect. In addition, searchers who encounter discrimination, which increases search effort, pay a premium in both sites.

Because the search effort and discrimination measures are correlated, the two interaction terms have been used here to identify the effects of distinctly different search strategies. Searchers using the low-cost strategy of searching for a short time and relying exclusively on tips from friends are identified here as inside-information searchers; they receive, on average, a 6-percent monthly discount in Brown County and a 4-percent monthly discount in St. Joseph County. In contrast, searchers employing a high intensity search strategy by looking at many units and using all four information sources, and encountering no discrimination, pay average market rents in Brown County and pay a 10-percent premium in St. Joseph County. The contrasting effects of these two search strategies suggest that the ability to find a bargain depends more on whom you know than on how hard you search. This finding may reflect the advantages that personal referrals offer both landlords and tenants. Tenants who discover units through tips from friends are able to find bargains with very low search costs. Landlords who rely on referrals to find tenants avoid the cost of advertising and have the additional advantage of being able to screen out unfamiliar and possibly undesirable tenants.

Although the search procedures used clearly condition a household's success in finding a bargain, the significance of several household variables testifies to the fact that not all searchers are equally adept at or interested in finding bargains. Since our model assumes that households will move only to acceptable units, the significant household characteristics can be interpreted as identifying households for which cost constitutes an especially important

criterion in choosing their dwellings. From this perspective, it appears that education significantly diminishes the relative importance of cost vis-a-vis other aspects of the housing bundle among Brown County renters. In contrast, single-person households, households in their twenties, and low-income households, are significantly more concerned with cost. In St. Joseph County, single-parent renters with children and single-person households are especially concerned with cost, whereas renters with children appear least able to find bargains.

The results of the security deposit equations are presented in Table 7. Only St. Joseph County results are included in this table because information on security deposits was not available in the baseline file for Brown County. Separate equations for white and black movers are presented because our results indicated that the relationship between search procedures and the size of security deposits is very different for those two groups. The independent variables included in the table are the same as those presented in Table 6, with the exception that current gross rent has been added to the security deposit equations to control for the fact that landlords of higher-rent units are more likely to require deposits than are those of lower-rent units.

The results for white movers again suggest that inside information is more important than search effort in determining the financial terms of the rental. Only three of seven search variables are significant; and the two significant negative coefficients--for the no-active-search and low-intensity/friends, dummies--identify movers who relied on tips from friends instead of on an intensive search effort to find their new dwellings. Indeed, the high-intensity/no problems searchers were actually required to pay significantly higher deposits. Since these high-intensity searchers have, by definition, encountered no discrimination during their searches, this result suggests that they, unlike other renters, are looking for hard-to-find units and are willing to pay whatever is necessary when they finally locate them.

Table 7

DEPOSIT EQUATIONS: RENTER HOUSEHOLDS BY RACE IN ST. JOSEPH COUNTY, INDIANA

Variables	White Movers		Black Movers	
	Coefficient	Value of t	Coefficient	Value of t
Dependent				
Security deposit (%)	--	--	--	--
Search				
Constant	-17.6		58.3	
No active search	-27.8	2.91*	-19.3	.53
Units examined (ln)	1.5	1.16	5.3	1.06
Search length (ln)	0.1	.12	0.2	.05
Sources used	-2.2	.97	-0.9	.12
Problems encountered (ln)	5.1	1.41	1.3	.10
Low intensity--friends	-16.3	2.80*	49.1	.79
High intensity--no problems	34.3	2.64*	44.5	1.28
Background				
Local movers	1.8	1.43*	7.0	1.15
Length of stay (ln)	2.9	2.02*	10.7	1.95*
Head's years of schooling	1.7	3.13*	2.6	.89
Single male head	7.6	1.29	-21.1	.71
Single female head	8.2	1.25	-12.5	.40
Single head with children	-14.4	1.73*	4.9	.16
Single person household	-3.1	-.52	-4.4	.17
Age of Head				
21	12.9	1.79*	-12.2	.47
21-29	5.5	1.09	-2.5	.13
30-39	4.7	.79	-17.5	.80
60-69	-6.0	.66	-16.0	.30
70+	-1.7	.14	N/A	N/A
Number of children	0.2	.13	6.7	1.31
Income eligible	2.3	.56	-28.6	1.34
Near eligible	-1.4	.33	-25.6	1.15
Income Source				
Welfare	-0.1	.94	0.2	.62
Pensions & Social Security	0.1	.99	0.4	1.16
Earnings	-0.1	1.48	0.1	.22
Monthly gross rent (in $10)	2.5*	6.58*	-4.9	3.11*
R^2	.160		.189	
F	6.10		1.29	

Source: Analysis of records from baseline survey of households, Site II.

NOTE: Regression analyses were performed on records of 862 white renters and 164 black renters reporting complete information of security deposits and rents who moved in 5 years preceding the survey.

*Coefficient is significantly different from zero at .10 level.

The significance of several background variables suggests that the price of units and the characteristics of movers are also associated with the size of the security deposit required. Other things equal, a $10 increase in rent is associated with a 2.5 percentage point increase in security deposits. In addition, households without recent market experience (those who have lived longest in their premove units), better educated households, and households headed by individuals under 21 pay higher security deposits.

In contrast to the results among white movers, search procedures have no effect on the size of the security deposits that blacks pay when moving into a rental unit. Since, after controlling for other factors, blacks pay higher security deposits than whites,* this result indicates that even when landlords are willing to rent to blacks, they may still discriminate against blacks by requiring them to pay a higher percentage of rent in security deposits. Interestingly, the size of those deposits varies inversely with rent level, suggesting that landlords of low-rent units require blacks to pay relatively higher deposits. The fact that only one household variable, length of stay in premove unit, is significant in the black equation, provides additional evidence that the market operates to the disadvantage of blacks, since this result suggests it is their race rather than any of their other characteristics that forces blacks to pay higher deposits. Only those black renters with recent market experience pay significantly lower deposits, perhaps because that experience makes them better able to determine what constitutes a fair security deposit.

SUMMARY AND CONCLUSIONS

This paper has done two things. First, it has introduced a model of residential mobility that incorporates the housing search process, and facilitates an analysis of how search behavior influences the housing adjustments that households make when they move.

*The coefficient of the race variable in the equation combining whites and blacks is 13.4 and highly significant.

Second, it has demonstrated how this model, when applied in a study of search behavior, can contribute to our general understanding of mobility and to specific policy issues. In this final section we concentrate on that application, summarize our findings, and discuss their policy and substantive implications.

Most renters, regardless of their race or their income, appear to favor a low-cost search strategy when they are looking for housing. They spend only two weeks searching, examine three or four alternatives, and rely mostly on friends and newspapers. This finding partly suggests why, counter to our expectations, we found little difference in search effort between low- and high-income renters.

Certain households, however, are at a distinct disadvantage when they search because they are significantly more likely to encounter discrimination during their search. Discrimination raises the psychological costs of searching and increases the effort needed to find an acceptable unit. Although all searchers who experience discrimination are vulnerable to those effects, low-income households in general, and low-income black households in particular, are most vulnerable because they encounter discrimination more often and are less able to bear the added costs it imposes on their search for better housing.

For households who are dissatisfied with their housing and are considering moving but anticipate encountering discrimination during a search, the decision to search creates a possible dilemma. If the household decides to search actively, it risks encountering discrimination, which reduces the effectiveness of search by increasing search costs. If, on the other hand, the household forgos any search for improved housing, it must tolerate a higher level of residential dissatisfaction. Barring some "windfall" discovery of a superior unit, its circumstances will remain unchanged. Apparently, many low-income and minority households choose not to search, and our paradigm offers a possible explanation for their choice.

An additional factor that may contribute to the apparent reluctance of most renters to conduct intensive searches is that such searchers do not often uncover housing bargains--either in terms of rents paid or the size of security deposits. Instead, our results have shown that tips from friends are far more effective than inten-

sive searches in locating bargains. Black searchers appear to be particularly disadvantaged in this respect, since they are forced to pay higher deposits regardless of their search behavior or their personal characteristics.

These results, while preliminary, suggest some of the ways in which discrimination impairs housing search and, hence, efforts by low-income and minority households to improve their housing through moving. Since the logic of demand approaches to housing assistance is to help low-income households act more effectively in their own interests in housing markets, this evidence has direct policy relevance. It points to a tendency toward inaction in the housing search process, thereby uncovering a potential weakness in the logic of those approaches that may require correction. In particular, the success of demand programs in broadening the residential options of low-income and minority households may partly depend on the types of relocation assistance they offer to participants who seek better housing but cannot bear high search costs by providing moving allowances or detailed relocation information, such as a list of available vacancies.* In addition to pointing to the need for relocation assistance components in demand programs, our findings also suggest the importance of strict enforcement of open housing laws that prohibit discrimination on the basis of marital status, presence of children, and race and nationality.

These results also contribute to our general understanding of residential mobility. For example, they indicate that uncertainty about the costs and benefits of moving curtail active search, which suggests why households do not continually adjust their housing and why currently dissatisfied households do not always move. Moreover, because search costs must be included in the calculation of the net benefits of moving, what others have called neither a very thorough nor a very rational process (see Barrett, 1973; Hempel, 1969a/b)

*We should note, however, that both of the supply experiments provided general housing information sessions (which few recipients attended) and that newspapers already provide searching households with lists of vacancies.

may, in fact, be reasonable behavior. Faced with a situation in which the harder a household searches, the better the unit it must find to justify the added search costs, it is not surprising that many renters appear to choose what they regard as the first acceptable unit rather than the best available unit.

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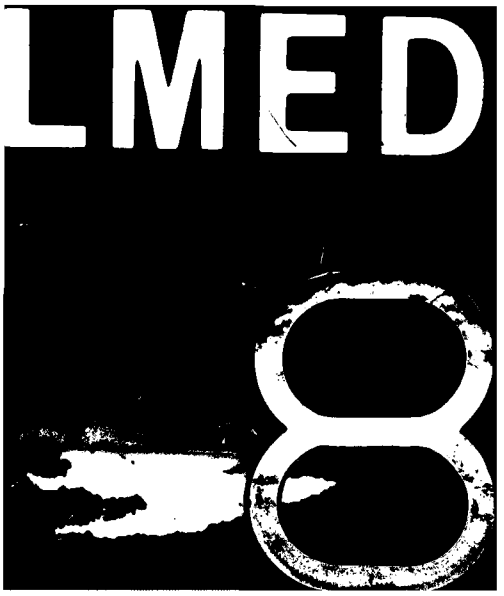
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