

ECONOMIC RESOURCES OF THE HOMELESS: EVIDENCE FROM LOS ANGELES

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This paper examines the economic resources of homeless adults using a unique data set from Los Angeles. The homeless rely on a variety of sources for income; the two most common sources are the government and the family. Over 58% received government transfers in the 30 days prior to the interview, while one-third had received cash assistance from a family member or friend. Familial transfers in the form of shared housing and meals also are important. While familial transfers buffer declines in income among the homeless, private support networks are not pervasive enough to overcome the severe difficulties the homeless face. Moreover, it is unclear why such a high share of the homeless do not participate in government assistance programs, although the evidence suggests that transaction costs are likely to be an important factor. (JEL I30)

I. INTRODUCTION

While issues related to homelessness have been prominent as far back as the turn of the century, the problem of homelessness has become increasingly obvious over the last 15 years, achieving a visibility and level of social concern unmatched since the Great Depression of the 1930s. More than anything else, this is related to the size of the homeless population. While efforts to enumerate such a mobile, hidden population are fraught with difficulty, best estimates currently suggest that at least 600,000 people in the United States experience what is usually referred to as "literal"

homelessness over the course of a week—that is, are living in temporary shelters or on the streets—and that as many as 2 million different people may be homeless at some point over the course of a year (Burt and Cohen, 1989). More recent evidence suggests that as many as 13.5 million people in the United States have been homeless at some point in their lives and that 5.7 million were homeless between 1985 and 1990 (Link et al., 1994).

While the causes of homelessness are extraordinarily complex (Koegel et al., 1996), homeless people almost unilaterally share some form of difficulty in accessing the economic resources needed to sustain housing. Even so, the sources of economic well-being on which the homeless draw are not well-understood. The objective of this paper is to investigate the economic resources of the homeless using unique data from Los Angeles. The study documents the various sources of support and the amount of assistance that is received from each. The paper then proceeds to concentrate on assistance received from one of the most important sources of income: the family. There has been growing interest among economists in understanding family support networks, or private transfers (see Schoeni, forthcoming, for a review), and our analyses of social support draw on some of the behavioral models that have been developed to address these issues.

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II. DATA

The data analyzed were collected as part of the Course of Homelessness Study, which interviewed 1,548 individuals in two Los Angeles County sites—the urban downtown area, which has the largest and most dense concentration of homeless individuals in Los Angeles County, and the suburban West Side beach communities of Santa Monica and Venice, which contain the second highest concentration of homeless individuals in the county. These 1,548 adults were each interviewed face-to-face in 1990. (The sample is reduced to 1,402 due to missing values on some variables, with no single item missing for more than 37 persons.)

A. Sampling Design

For the purposes of this survey, people were considered to be homeless if, at some point in the last 30 days, they had spent at least one night in (i) a setting defined as temporary shelter, not designed for shelter, or in an impermanent arrangement for which they did not pay or (ii) a program for homeless individuals that defined stays as temporary. Women were oversampled to comprise 30% of the sample though they were in fact approximately 16% of the homeless population across the downtown and West Side areas.

To obtain a representative sample of homeless individuals in each of the two study sites, three nested sampling strata are defined—individuals who use shelter beds, individuals who do not use shelter beds but do use soup lines, and those who use neither—and allocated interviews to each in proportion to the number of homeless individuals who fall within them. Within the shelter bed and soup line strata, random samples of homeless individuals were drawn at each relevant facility in proportion to the number of eligible individuals the particular facility serves in a 30 day period. Individuals who do not use shelter beds or soup lines while they slept outside at night were randomly sampled, using a strategy modeled after Rossi et al. (1986).

Implementing this sampling design involved using data obtained from three sources. First, a “blitz” sampling survey provided population estimates of homeless persons across the three sampling strata in each of the two study areas. Second, analyses of the residential

records of almost 40 shelter programs provided an unduplicated count of individuals served by each in a given month. Third, a survey of a random sample of 1,586 homeless meal service users provided an estimate of the number of different people served by each meal program, which was used to estimate a proportionate allocation of interviews to each meal program.¹

Survey data collection took place in a stratified random sample of blocks in the two study areas and in 77 different bed and meal programs. In all, 5,342 individuals were approached for survey screening interviews to determine whether they met the operational definition of homelessness and whether they met eligibility requirements for the sampling strata at hand. Of these 5,342 individuals, 4,763 (89%) completed the short screening interview. Of the individuals screened, less than two-fifths were eligible to be interviewed. A total of 1,548 individuals completed the interview, with a survey response rate of 87%. Koegel et al. (1994) provide details on the sampling procedures relative to alternative approaches.

Sampling weights were derived using two different underlying stochastic models of the probability that a homeless person will be represented in each of the three strata in the two

1. To implement the sampling design, estimates were made of: (i) the size of the homeless populations in the downtown and West Side areas and (ii) the numbers of homeless individuals in each area who used bed and/or meal services. To obtain these data, two all-night “blitz” sampling surveys were fielded. On these two nights, approximately 30 interviewers thoroughly searched a sample of blocks in each area between the hours of 11:00 pm and 4:30 am. Anyone found either outdoors or in places for which there was public access was enumerated. In addition, randomly selected individuals were interviewed to determine whether they were homeless, and if so, whether they had used meal or bed services within the previous 30 days. In addition, all shelters in each area were contacted to determine their census on that night. The street blocks searched by interviewers in the dead of night comprised a stratified random sample of the universe of blocks in each area, with stratification based on the number of homeless people expected to be found on each block on an average night, and judgments based on information collected from police and other experts on a block-by-block basis. Knowing the probability of selection of blocks, and of individuals within blocks, the non-sheltered population in each of the two study areas were estimated. Combined with the shelter census data, the total homeless population size in these areas on a given night was estimated. In addition, the proportion of the population falling into each of the sampling strata were estimated. Based on this information, interviews were allocated proportionally to these two sites and to the three sampling sectors within each.

locations. The two models were conceived as bounds on actual probabilities. One model assumes that individuals repeatedly go to the same facilities and street locations over time, and the other model assumes that individuals choose randomly among geographically available facilities and street locations. Estimation of the probabilities of being represented in each strata under each of the models included two components: the selection of facilities and street locations on any given day (or night) of survey sampling, and the selection of individuals within locations, given the selection of facility/location. The weights, which are used in all analyses except those presented in the regression tables, are an average of the weights derived from these two stochastic models.

B. Income, Social Support, Mental Illness, and Substance Abuse

The survey collected information on familial assistance in the form of cash, meals, and housing in the 30 days preceding the interview. The homeless reported the total dollar amount of financial transfers they received. For meals, the number of days in which the homeless received meals from each source (including family and friends) was collected. The homeless also were asked the place they stayed in each of the past 30 nights. Information on participation in government social service programs was obtained, including whether the homeless had participated in each of the major public programs in the past 30 days and whether they had participated in each of these programs at any time in their lives. In addition, income from formal employment, panhandling, selling recyclables or goods, and selling blood were reported during the interview.

Prevalence of mental illness and substance abuse was ascertained through the diagnostic interview schedule (DIS). The DIS is a standardized psychiatric instrument that allows lay interviewers to collect information that, when scored using a computerized algorithm, yield diagnoses of specific disorders according to the criterion of the American Psychiatric Association (DSM-III-R). The summary measures of chronic mental illness, substance abuse, and dual diagnosis are operationalized based on these DIS data. Koegel et al. (1988) provide additional information on these measures.

III. BACKGROUND: THE HOMELESS IN LOS ANGELES

Nationally, the homeless are relatively young and less educated, primarily male, disproportionately minority and veterans of the military, and they have relatively high levels of drug abuse and mental illness in comparison to the housed population (Institute of Medicine, 1988; Burt and Cohen, 1989; Rosenheck et al., 1994; O'Flaherty, 1996). The evidence from Los Angeles mirrors this profile (Table 1). The descriptive information is broken down by race/ethnicity because familial support varies substantially among these groups. For comparison, Table 1 also reports the characteristics of all people living in Los Angeles County according to the 1990 census.

A. Socioeconomic and Demographic Profile

A homeless person is five times more likely to be black than is a person in Los Angeles as a whole; just over 50% of the homeless in Los Angeles are black even though only 10.6% of the overall population is black. Hispanics are disproportionately underrepresented among the homeless even relative to whites. Although whites and Hispanics represent about the same share of the census population in Los Angeles (about 40% each), the homeless are 50% more likely to be white as opposed to Hispanic.

A large fraction of the homeless, 25%, served in the military; in Los Angeles as a whole, only 10% of adults are veterans. The differential between the homeless and the census population is due partly to the fact that the homeless population is male dominated, and males are more likely to have served in the military. Among men, 30% of the homeless and 19% of the entire Los Angeles population were veterans. The disproportionate representation of veterans among the homeless is consistent with estimates by Rosenheck et al. (1994). However, Rosenheck et al. (1991) and Rosenheck et al. (1992) argue that the high rates of homelessness are not due to the psychological impact of participating in the Vietnam war. Instead, Rosenheck et al. (1994) argue that this disparity is due primarily to high rates among veterans who served in non-wartime eras, especially the post-Vietnam era. These veterans were admitted under the All Volunteer Force policy starting in 1973, and Rosenheck et al. (1994) argue that the admis-

TABLE 1
Characteristics of the Homeless and of Residents of Los Angeles

| | Sample of Homeless in Los Angeles | | | | Los Angeles 1990 |
|---|-----------------------------------|--------------------------------|----------------------|------------------------------|---------------------|
| | Non-Hisp. Whites (N=217) | Non-Hisp. Blacks (N=826) | Hispanics (N=182) | Entire Sample (N=1402) | |
| <i>Individual Characteristics</i> | | | | | |
| Race/ethnic (%): | | | | | |
| Non-Hisp. White | | | | 21.9 | 41.0 |
| Non-Hispanic Black | | | | 52.9 | 10.6 |
| Hispanic | | | | 14.7 | 37.3 |
| Median income past 30 days* | \$200 | \$285 | \$182 | \$236 | \$3,107 |
| % receiving public assistance* | 54.4 | 65.1 | 30.9 | 54.4 | 9.8 |
| % female | 17.5 | 17.7 | 9.8 | 16.7 | 50.1 |
| Age (mean):* | 38.1 years | 36.9 years | 36.1 years | 37.1 years | |
| % less than 25 | 11.9 | 5.8 | 14.5 | 8.8 | 16.2 |
| % 25 to 34 | 29.0 | 39.8 | 38.1 | 36.4 | 27.2 |
| % 35 to 44 | 31.7 | 37.8 | 23.8 | 34.1 | 20.4 |
| % 45 to 54 | 18.8 | 13.1 | 18.4 | 15.3 | 13.2 |
| % 55 or older | 8.7 | 3.6 | 5.2 | 5.3 | 25.4 |
| Marital Status (%)*: | | | | | |
| Never married | 49.8 | 50.2 | 54.9 | 49.7 | 33.8 |
| Married | 7.4 | 6.3 | 9.7 | 7.2 | 48.5 |
| Divorced/separated/widowed | 42.8 | 43.5 | 35.4 | 40.8 | 11.7 |
| Education (%): | | | | | |
| < 12 years | 36.6 | 28.1 | 73.1 | 40.3 | 29.9 |
| 12 years | 30.2 | 39.6 | 11.9 | 31.1 | 20.7 |
| 13-15 years | 24.4 | 27.3 | 13.8 | 23.5 | 27.1 |
| 16 or more | 8.8 | 5.0 | 1.2 | 5.1 | 22.3 |
| % born in the U.S. | 81.1 | 97.8 | 29.7 | 81.6 | 66.2 |
| % born in Mexico | 1.0 | 0.0 | 50.1 | 8.1 | |
| % served in the military* | 31.7 | 26.7 | 20.2 | 25.2 | 10.2 |
| % chronically mentally ill | 33.1 | 18.3 | 14.5 | 22.2 | |
| % chronic substance abuser | 75.6 | 68.9 | 64.9 | 68.9 | |
| % dually diagnosed | 27.9 | 13.7 | 11.7 | 17.1 | |
| % with child with them | 2.8 | 5.0 | 4.4 | 4.0 | |
| % who lived in foster home | 13.5 | 8.0 | 4.7 | 11.8 | |
| % with any health insurance | 28.9 | 34.2 | 18.2 | 32.9 | |
| <i>Characteristics of Potential Support Network</i> | | | | | |
| Guardian's educ. (%): | | | | | |
| < 12 years | 31.6 | 43.2 | 84.0 | 49.4 | |
| 12 years | 34.5 | 27.5 | 9.6 | 25.3 | |
| 13 to 15 years | 10.6 | 13.4 | 2.6 | 10.5 | |
| 16 or more | 23.2 | 15.9 | 3.8 | 14.8 | |
| % with living family member | 90.1 | 92.7 | 95.1 | 90.4 | |
| % with important relative in L.A. | 14.7 | 45.2 | 25.1 | 32.7 | |

Dollars expressed in 1991 value.

*For the estimates based on the census: marital status is for all people 15 or older; the age distribution is for the population 18 or older (the youngest homeless individual is 18 years old); education is for the population 25 and older; military service is for the population 16 and older; median income and percent with public assistance is for all households. Los Angeles refers to Los Angeles county. The U.S. Bureau of the Census, 1990 Census of Population and Housing Summary Tape File 30 is the source of the 1990 estimates for L.A.

TABLE 2
Total Income in the Past 30 Days by Source of Income

| Income Source | Proportion Receiving | Mean Amount Received Among Recipients |
|------------------------|----------------------|---------------------------------------|
| Total | 94.8% | \$408 |
| Formal employment | 29.8 | 346 |
| Informal sources | | |
| Family/friends | 32.7 | 80 |
| Panhandling | 23.3 | 86 |
| Selling recyclables | 20.2 | 64 |
| Selling goods | 20.7 | 130 |
| Selling blood | 12.9 | 31 |
| Other sources | 9.4 | 17 |
| Government assistance* | 57.6 | 300 |

N=1,402.

*Government assistance includes AFDC, Food Stamps, General Relief, Unemployment Insurance, Veterans' Benefits, and Supplemental Security Income/Disability Income.

sion of poorly adjusted men into the military under this policy, along with reduced availability of Veterans Affairs benefits to these veterans, caused the higher rates of homelessness among veterans.

One of the distinct characteristics of the homeless is their high prevalence of chronic mental illness and drug abuse; almost 70% of the homeless in Los Angeles are chronic substance abusers and almost one-quarter are chronically mentally ill. The homeless who are suffering from chronic mental illness are also likely to be chronic substance abusers, with 17% of the homeless dually diagnosed—that is, they are both chronically mentally ill and chronic substance abusers.

Although the homeless are about 33% more likely to have less than a high school degree than are the adult population as a whole in Los Angeles, 29% have more than a high school degree, and 5% have at least a bachelor's degree. Moreover, much of the difference in education between the homeless and Census populations is due to very low educational attainment among the Hispanic homeless, 73% of whom do not have a high school degree. Thirty-two percent of homeless blacks and whites have some college, and almost 10% of whites have completed 16 years of schooling. For Los Angeles as a whole, 38% of whites have completed 13 to 15 years and 17% have

completed 16 or more years (not shown in the table).

The income of the homeless is very low (Table 2). Among the homeless who did have some income, the average monthly amount was only \$408, with one-half of the homeless having income of less than \$288 and one-quarter having income below \$105. Only 29.8% received income from formal employment, while 23.3% had panhandled, 20.2% had sold recyclables, and 12.9% had sold their blood for cash in the 30 days prior to the interview. The anecdotal evidence that many panhandlers make substantial amounts of income is not supported by these data. On average, panhandlers earned only \$86/month from this activity. Labor market earnings are also very low, even among the homeless who are formally employed. On average, the homeless who are employed in the formal market earn just \$346/month. Using information collected in the survey on the number of days the homeless were employed during the month, the average daily wage was \$36, with one-half making less than \$25 per day and 90% making a daily wage of less than \$70.

B. Assistance from Family and Friends

The most common source of non-government income is relatives; 32.7% received help

TABLE 3

Proportion Currently Participating and Ever Participated in Each Government Assistance Program

| Government Program | Entire Sample (N=1,402) | | Born in the U.S. (N=1,178) | | Born in the U.S. & Not Chronically Mentally ill (N=941) | |
|---------------------------------|----------------------------|------|-------------------------------|------|---|------|
| | Currently | Ever | Currently | Ever | Currently | Ever |
| <i>Any program</i> | 57.6 | 83.5 | 60.2 | 93.1 | 58.6 | 91.7 |
| Food Stamps | 47.1 | 74.0 | 52.6 | 83.1 | 53.7 | 83.1 |
| General Relief | 24.6 | 59.2 | 27.8 | 67.1 | 27.9 | 65.8 |
| Supp. Sec. Inc./Disability Inc. | 8.8 | 13.4 | 9.6 | 14.5 | 7.3 | 11.6 |
| AFDC | 2.6 | 13.4 | 2.4 | 15.1 | 2.5 | 14.5 |
| Unemployment Insurance | 1.9 | 42.5 | 2.1 | 47.7 | 2.1 | 47.3 |
| VA Disability Benefits | 1.4 | 3.5 | 1.0 | 3.6 | 0.7 | 2.6 |

N=1,402.

from informal support networks in the month prior to the interview (Table 2). However, the amount of support received from friends and family, \$80 on average, is not large, and the variance is substantial; among recipients, 10% received at least \$200 while 25% received \$10 or less. For the entire sample, familial assistance accounts for 7% of total income.

Family and friends also provide food and housing. During the 30 days prior to the survey, 45.5% of the respondents had received meals on at least one day from a family member or friend (not shown in tables). But on average, meals were received from family and friends on only 8.1 of the 30 days. Moreover, only 4% of the sample received meals from this source for more than 20 days. Shelters and purchased meals were the most common sources of food, with over 80% receiving meals from each of these sources.

The homeless do not often stay in the homes of relatives. On average, only 8.4% of the 30 nights prior to the interview were spent with a family member or friend (not shown in tables). However, if a homeless person had not stayed in a shelter, slept in the streets, or used a meal program in the past 30 days, then they would not have been included in the sampling. Therefore, our sample is likely to lead to an underestimate of the number of nights "displaced" people spend with relatives and friends.

C. Participation in Government Transfer Programs

Financial assistance from the government is the most common source of income, and it is received by 57.6% of the homeless, accounting

for 41% of total income, on average. Individuals who are homeless are five times more likely to participate in a primary government assistance program. Although this relatively high rate of participation is not surprising, what is surprising is that only about one-half of the homeless receive government assistance. Almost all of the homeless have income low enough to qualify for assistance through General Relief or Food Stamps, but yet one-half of the homeless are not participating in these programs. The low rates of participation among the homeless as a whole are not due to the fact that some homeless are illegal immigrants who are not eligible for benefits; even among the homeless born in the United States, almost one-half do not receive Food Stamps and over two-thirds do not receive General Relief (Table 3).

National participation rates (among those eligible for benefits, not just the homeless) have been estimated at 68% for AFDC, 38% for Food Stamps (Fraker and Moffitt, 1988), and 55% for Supplemental Security Income (McGarry, 1991). Several hypotheses suggest why individuals who are eligible for government assistance may not participate: lack of information about the program, stigma associated with participating in government programs, lack of mental capacity to apply for benefits because of chronic mental illness, transactions costs associated with applying and re-applying for benefits, or failure to fulfill program rules such as work requirements.

The fact that 62% of the homeless not currently receiving government assistance were enrolled in the past implies that the homeless know that the programs exist and that stigma

is not a major barrier to their participation (Table 3). In addition, the share participating in government programs is no higher among the homeless who are not chronically mentally ill, implying that the low participation rates are not due to lack of mental capacity (Table 3).

The transactions costs of applying and re-applying for benefits and the inability to fulfill program rules are the remaining explanations for why participation is so low. These reasons are salient explanations for the lack of participation in some programs in Los Angeles. In particular, at the time of the survey, to receive General Relief most participants had to work on County projects for about 70 hours per month and collect signatures from 20 prospective employers certifying that they had sought work. A homeless person who failed to meet these requirements was not permitted to receive General Relief for two months. In addition, when Los Angeles County re-evaluated a General Relief case, they mailed a letter to the participant and required that person to report to a re-evaluation hearing that was scheduled no more than 10 days from the date on the letter. If they did not report to the hearing, their benefits were stopped. For homeless people, this notification letter was sent to the mailbox in the welfare office where they normally picked up their General Relief check. The homeless typically checked their mailbox only once a month, when their check arrived. As a result, they learned about the re-evaluation hearing too late, and their benefits were terminated. The homeless would have had to have checked their mailbox every week to make sure that this did not happen, which increased the transaction costs of receiving benefits and perhaps contributed to the low participation rate.

In sum, governmental assistance is important for the homeless despite the fact that many homeless who have very low income do not participate in Food Stamps and other programs. In addition, although many homeless were raised in strained families (Koegel et al., 1995), a substantial share do receive assistance from their social support network.

V. MODELS OF SOCIAL SUPPORT

Several models attempt to explain why people give assistance to others through private transfers—i.e. social support—especially in

the context of the family. These include models of altruism, exchange, and “warm glow.” Perhaps the most intuitively compelling model, and the one which has received the greatest attention, is altruism (Becker, 1974; Barro, 1974). This model, stated in terms of parent-child relations for illustration, assumes that a parent’s well-being is directly related to the well-being of an adult child (i.e., $U_p = U_p(X_p, U_c)$, where X_p are goods consumed by the parent, U_c is the utility of the adult child, and U_p is the utility of the parent). Like most models of social support, altruism implies that individuals deciding to give assistance to others take into consideration their own well-being as well as the well-being of people whom they may assist. Specifically, the model implies that, *ceteris paribus*, people with lower income are more likely to receive assistance and receive a larger amount of transfers. In addition, as shown by Cox and Rank (1992), the strict altruism model implies that the effect of the parent’s income minus the effect of the child’s income should equal one.

The altruism model has been extended by Andreoni (1989) to include simultaneous “warm glow” giving. That is, parents not only care about the well-being of their children, they care about the amount of gifts *per se*. As Andreoni shows, this extension leads to predictions that, relative to altruism, transfers are less responsive to changes in the income of the child. Moreover, if the behavior is only motivated by “warm glow,” then the amount of assistance given to the child is independent of the characteristics of the child.

A third model, exchange, has been the most widely analyzed alternative to altruism (Kotlikoff and Spivak, 1981; Cox, 1987; Bernheim et al., 1985; Cox and Rank, 1992; Cox and Jakubson, 1995). The basic presumption is that, using the parent-adult child notation again, children provide something to their parents, such as assistance in old age, a sympathetic ear, or contemporaneous help in household production, and in return parents give their children cash. The parent-child relationship can be viewed as a market transaction where the parent demands services, which presumably only the child can provide or for which there are no close market substitutes, and the child provides services in return for remuneration. As a result, the relationship be-

tween the income of the children and the amount of assistance they receive from their parents is a function of the elasticities of supply and demand for the services provided by the child, and it could be either positive, negative, or zero (Cox, 1987).

Income is one factor in determining the child's well-being, but there clearly are others. For example, the potential recipient's health will presumably be an important determinant of their well-being and, hence, determine the amount of assistance they receive. Similarly, if the potential recipient has children, then the grandparents of the children may be more likely to provide assistance because they care about both their child and grandchild. For these reasons, the health of the homeless person and whether they have children with them are incorporated in the analyses.

Almost all models imply that the potential donor's characteristics (e.g., parent's characteristics) are also important determinants of assistance. For example, people with greater resources, *ceteris paribus*, would be more likely to assist others. In the data, there are two indicators of potential donor's economic status: the education and the socio-economic status (relative to other families) of the homeless person's primary guardian while the homeless person was a child.

The majority of the research on altruism focuses on financial transfers between individuals. However, as several recent surveys suggest (e.g., the Health and Retirement Survey, the Asset and Health Dynamics Survey, the National Survey of Families and Households, and the 1988 Panel Study of Income Dynamics), substantial amounts of assistance within families take other forms, such as time help and housing. Data for the analysis here permit examining transfers in the form of shared housing and meals in addition to financial transfers.

VI. VARIATION IN SOCIAL SUPPORT

These behavioral models form the basis of the empirical specification and imply that the analyses here should include factors that indicate the level of need of the homeless and the ability of family and friends to give assistance. In the data, several characteristics of the homeless represent these factors. To examine the competing factors determining the variation in social support within the homeless population,

multivariate models are estimated for the probability of receipt of financial transfers, meals, and shared housing. A reduced form Probit model is specified for each of the three forms of assistance.² To investigate the correlation in the error terms of the three models, bivariate Probit models are estimated with the three combinations of transfers: financial transfers and meals, financial transfers and housing, and meals and housing. The single equation models of financial transfers are virtually identical to the bivariate models, and statistical significance at conventional levels of all coefficients correspond between the two specifications. The single equation Probit for financial transfers is reported in Table 4.

The parameter estimates for the single equation Probit models for meals and housing and the bivariate Probit model of these two outcomes are slightly different. The bivariate Probit estimates for housing and meals are reported in Table 5. The fact that the correlation in the errors, ρ , in the models for meals and housing is high (0.520), while ρ is 0.110 for the bivariate Probit models of financial transfers and meals and 0.112 for financial transfers and housing) is not surprising given that a friend or relative who provides housing is likely to offer food as well. (Models of the amount of financial assistance, meals, and housing, conditional on receiving assistance in the given form, also are examined, but only a few coefficients are precisely estimated, and none of the coefficients on the income variables are precisely estimated. Therefore, these estimates are not reported.)

Table 6 demonstrates the marginal effects of selected covariates on the probability of receiving transfers of a given form. The predicted probability of receipt of transfers for a baseline sample based on the coefficient estimates is calculated, and then certain characteristics of the homeless are altered to examine their effect on the predicted probabilities. The baseline is evaluated for a black male who has the average age of the sample members (37.8 years), who is never married, born in the United States, does not suffer from chronic substance abuse or mental illness, has been

2. Government income is excluded from the models because it is endogenous to familial transfers and because no reasonable instruments exist that would identify this effect in the data.

TABLE 4
Probit Model of Financial Assistance Received & Descriptive Statistics

| Explanatory variable | Probit | | Descriptive Statistics | |
|---------------------------------------|-------------|----------------|------------------------|----------------|
| | Coefficient | Standard Error | Mean | Standard Error |
| Race and gender: | | | | |
| Black female | -0.239** | 0.120 | 0.141 | 0.009 |
| White male | -0.334*** | 0.132 | 0.148 | 0.009 |
| White female | 0.006 | 0.168 | 0.062 | 0.006 |
| Hispanic male | 0.173 | 0.188 | 0.106 | 0.008 |
| Hispanic female | -0.060 | 0.293 | 0.023 | 0.004 |
| Other male | 0.034 | 0.190 | 0.045 | 0.006 |
| Other female | 0.095 | 0.234 | 0.029 | 0.005 |
| Age | -0.026 | 0.018 | 37.8 | 0.269 |
| Age squared ^a | 0.203 | 0.223 | 1469 | 21.9 |
| Marital status: | | | | |
| Married | 0.015 | 0.145 | 0.077 | 0.007 |
| Widowed | -0.158 | 0.233 | 0.031 | 0.005 |
| Divorced/separated/widowed | -0.071 | 0.084 | 0.416 | 0.013 |
| Born in U.S. | 0.296** | 0.150 | 0.862 | 0.009 |
| Chronically mentally ill | 0.329* | 0.180 | 0.215 | 0.011 |
| Chronic substance abuse | 0.380*** | 0.090 | 0.669 | 0.013 |
| Dually diagnosed | -0.351* | 0.206 | 0.164 | 0.009 |
| Months homeless | -0.004*** | 0.001 | 44.5 | 1.71 |
| Months homeless squared ^a | 0.009** | 0.0039 | 6096 | 553 |
| Education: | | | | |
| < 12 years | -0.067 | 0.094 | 0.373 | 0.013 |
| 13-15 years | -0.067 | 0.098 | 0.262 | 0.012 |
| 16 years or more | -0.031 | 0.163 | 0.063 | 0.007 |
| Child with them | -0.191 | 0.188 | 0.048 | 0.006 |
| Was a foster child | 0.055 | 0.122 | 0.101 | 0.008 |
| Interviewed downtown | -0.046 | 0.095 | 0.735 | 0.012 |
| Income ^a | -0.273** | 0.119 | 180 | 10.49 |
| White*income ^a | 0.135 | 0.292 | 29.9 | 4.32 |
| Hispanic*income ^a | -1.175** | 0.576 | 25.5 | 3.81 |
| Other*income ^a | -0.056 | 0.398 | 13.4 | 3.34 |
| Guardian's education: | | | | |
| < 12 years | -0.041 | 0.092 | 0.471 | 0.013 |
| 13-15 years | 0.171 | 0.128 | 0.109 | 0.008 |
| 16 or more years | 0.224* | 0.118 | 0.146 | 0.009 |
| Guardian's socio-econ. status: | | | | |
| Low | 0.029 | 0.089 | 0.292 | 0.012 |
| High | 0.104 | 0.103 | 0.167 | 0.009 |
| Has a living family member | 0.112 | 0.153 | 0.922 | 0.007 |
| Most important family in LA | 0.356*** | 0.081 | 0.322 | 0.013 |
| Constant | -0.288*** | 0.436 | | |
| Log-likelihood | -808.9 | | | |
| Number of observations | 1402 | | 1402 | |
| Mean of dependent variable | .3117 | | | |

^aThe parameter estimates for age-squared, all income variables, and the number of months homeless squared are multiplied by 1000. Sample weights are not used in calculating the descriptive statistics. Omitted categories: Black male; Never married; 12 years of own education; 12 years of guardian's education; Guardian's socio-economic status is medium.

*, **, and *** indicate statistical significance at the .01, .05, and .10 levels, respectively.

TABLE 5
Bivariate Probit Models of Housing And Meals Received

| Explanatory variable | Housing | | Meals | |
|--------------------------------------|-------------|------------------|-------------|----------------|
| | Coefficient | Standard Error | Coefficient | Standard Error |
| Race and gender: | | | | |
| Black female | -0.141 | 0.136 | 0.151 | 0.117 |
| White male | 0.181 | 0.152 | -0.197 | 0.122 |
| White female | 0.072 | 0.199 | -0.222* | 0.173 |
| Hispanic male | -0.162 | 0.219 | -0.093 | 0.174 |
| Hispanic female | 0.097 | 0.282 | 0.381 | 0.285 |
| Other male | -0.204 | 0.274 | 0.201 | 0.212 |
| Other female | 0.353 | 0.265 | 0.181 | 0.224 |
| Age | -0.017 | 0.022 | -0.008 | 0.018 |
| Age squared ^a | -0.010 | 0.278 | -0.051 | 0.227 |
| Marital status: | | | | |
| Married | -0.133 | 0.174 | -0.204 | 0.149 |
| Widowed | 0.207 | 0.234 | 0.284 | 0.204 |
| Div/sep/widowed | 0.061 | 0.094 | -0.081 | 0.081 |
| Born in U.S. | 0.035 | 0.184 | 0.012 | 0.146 |
| Chronically mentally ill | 0.059 | 0.228 | 0.197 | 0.178 |
| Chronic substance abuse | 0.142 | 0.101 | 0.225*** | 0.087 |
| Dually diagnosed | -0.200 | 0.257 | -0.236 | 0.203 |
| Months homeless | -0.004** | 0.002 | 0.0002 | 0.0012 |
| Months homeless squared ^a | 0.0092 | 0.0076 | 0.0013 | 0.0039 |
| Education: | | | | |
| Less than 12 years | -0.149 | 0.108 | -0.013 | 0.089 |
| 13-15 years | -0.017 | 0.108 | 0.031 | 0.096 |
| 16 years or more | -0.356* | 0.203 | -0.116 | 0.164 |
| Child with them | 0.191 | 0.193 | -0.309* | 0.186 |
| Was a foster child | 0.012 | 0.131 | 0.059 | 0.123 |
| Interviewed downtown | 0.172 | 0.108 | -0.027 | 0.092 |
| Income ^a | -0.101 | 0.130 | -0.059 | 0.127 |
| White*income ^a | 0.419 | 0.335 | 0.455** | 0.216 |
| Hispanic*income ^a | 0.529 | 0.367 | -0.015 | 0.336 |
| Other*income ^a | -0.117 | 0.515 | -0.941 | 0.766 |
| Guardian's education: | | | | |
| Less than 12 | 0.172 | 0.110 | 0.003 | 0.089 |
| 13-15 years | 0.270* | 0.146 | 0.145 | 0.126 |
| 16 or more years | 0.222 | 0.139 | 0.165 | 0.116 |
| Guardian's socio-econ. Status: | | | | |
| Low | 0.106 | 0.102 | 0.101 | 0.085 |
| High | 0.317*** | 0.115 | 0.338*** | 0.101 |
| Has a living family member | -0.097 | 0.175 | 0.006 | 0.144 |
| Most important family in L.A. | 0.289*** | 0.091 | 0.130* | 0.081 |
| Constant | -0.512 | 0.517 | -0.079 | 0.434 |
| ρ (standard error) | | 0.520*** (0.043) | | |
| Log-likelihood | | -1521.3 | | |
| Mean of dependent variable | 0.2018 | | .4272 | |

^aThe parameter estimates for age-squared, all income variables, and the number of months homeless squared are multiplied by 1000. Omitted categories: Black male; Never married; 12 years of own education; 12 years of guardian's education; Guardian's socio-economic status is medium.

*, **, and *** indicate statistical significance at the .01, .05, and .10 levels, respectively. $N=1402$.

TABLE 6
 Predicted Probability of Receiving Familial Assistance for Various Individuals
 by Type of Assistance. Based on Probit and Bivariate Probit Models in Tables 4–5

| | Cash | Housing | Meals |
|--|-------|---------|-------|
| Baseline | 33.6% | 19.6% | 38.3% |
| White male | 22.7 | 25.9 | 35.3 |
| Black female | 25.5 | 18.0 | 39.5 |
| Hispanic male | 40.5 | 17.6 | 37.0 |
| Dually diagnosed | 47.6 | 21.6 | 39.7 |
| Homeless 6 months | 38.6 | 24.9 | 38.0 |
| Homeless 60 months | 31.9 | 20.1 | 38.3 |
| Parent 16 or more years of schooling | 42.5 | 26.9 | 39.6 |
| Most significant relative not living in LA | 22.1 | 15.0 | 36.4 |
| Increase income (of blacks) by \$200 | 32.0 | 20.8 | 38.0 |

Baseline is evaluated for a black male who has the average age (37.8 years), who is never married, was born in the United States, does not suffer from chronic substance abuse or mental illness, has been homeless the average number of months in the sample (44.6 months), has a high school education, does not have a child with him, did not grow up in a foster home, was sampled on the West Side of Los Angeles, has the average non-governmental income (\$181), his primary guardian while a child had high school degree, his parents were average in terms of economic status relative to other households when he was a child, he has a family member alive, and his most important relative is living in Los Angeles.

homeless the average number of months in the sample (44.6 months), has a high school education, does not have a child with him, did not grow up in a foster home, was sampled on the West Side of Los Angeles, has the average (non-governmental and non-familial transfer) income (\$181), has a primary guardian who obtained a high school degree and was average in terms of socio-economic status relative to other households when the sample member was a child, has a family member alive, and has his most important relative living in Los Angeles.

A. Needs of the Homeless

The receipt of income affects assistance received from relatives. When income (excluding assistance received from friends and family and government transfers) decreases, signaling greater need, the probability of receiving cash assistance increases. Although statistically significant, the estimate (for blacks, which is the omitted group) implies that the effect is small; an increase in income by \$200 reduces the probability of receiving cash assistance from 33.6% to 32.0% (Table 6). The effect is larger among Hispanics than blacks.

While income does influence the probability of financial assistance received from family

and friends, it does not have much of an effect on the receipt of housing or meals. The only significant coefficient is a positive effect on the meals received by whites, but this difference is not large.

Simple bivariate tabulations demonstrate that the homeless who are chronically mentally ill are more likely to receive meals than are the homeless who are not (51.0% versus 42.8%). However, the homeless who are and who are not chronically mentally ill are equally likely to receive financial assistance (32.2% and 32.3%, respectively), and the chronically mentally ill are less likely to receive housing assistance (18.6% versus 22.1%). However, in the multivariate analyses, the effects of being chronically mentally ill on each of the three forms of familial support are positive, although statistically significant differences are only found for financial assistance (Tables 4–5).

The support network of someone who is a chronic substance abuser may be more likely to provide assistance in-kind instead than in cash in order to prevent the abuser from purchasing additional drugs. The estimates imply no effect of being a chronic substance abuser on the probability of receiving housing assistance. In addition, for meals and cash, if anything, the positive effect of being a substance

abuser is bigger on cash than meals, and this is true for individuals who are dually diagnosed as well. Additional evidence on this point is most clearly demonstrated by the fact that the share receive housing assistance varies little among the homeless who are neither chronically mentally ill nor a chronic substance abuser, only chronically mentally ill, only a chronic substance abuser, or both, ranging from 22%–26%. Moreover, whereas people who are only chronic substance abusers are 11 percentage points more likely to receive cash than are people with neither condition (i.e., 36% versus 25%, respectively), chronic substance abusers are only 6 percentage points more likely to receive meals (i.e., 45% versus 39%, respectively). The gap in favor of providing cash relative to meals (or housing) for chronic substance abusers relative to those with neither condition is slightly larger among individuals who did in fact receive assistance in one of the three forms. In sum, the evidence does not suggest that support networks substitute in-kind assistance for meals when providing assistance to chronic substance abusers.

Individuals who have spent a greater number of months homeless are less likely to receive cash and housing assistance. For example, the probability of receiving cash assistance among people who have been homeless only six months is 38.6%, declining to 34% and 31.9% for durations of 42 months and 60 months, respectively. However, the probability of receiving meals from family and friends does not diminish significantly with the duration of homelessness.³ Only a small share of the homeless have a child living with them, but of those who do, they are more likely to receive housing assistance from family and friends.

B. Ability of the Support Network to Provide Assistance, and Other Covariates

The homeless whose childhood guardian had higher wealth and were more educated are more likely to receive money and housing. For example, based on the predictions in Table 6 that hold all other factors constant, relative to

the homeless whose guardian had 12 years of school, the homeless who had a guardian with at least 16 years of schooling are 26% more likely to receive cash assistance and 37% more likely to receive housing assistance. In addition, the homeless whose guardian had high socioeconomic status are more likely to receive meals and housing than the homeless whose guardian had medium socioeconomic status.

Those homeless whose most important family member lives in Los Angeles are much more likely to receive assistance, and this is true of all outcomes measured. Table 6 implies that having the most significant relative in Los Angeles increases the probability of receiving cash, housing, and meals by 52%, 30%, and 5%, respectively.

The homeless who were born in the U.S. also received more assistance. This may be partly due to the fact that many immigrants move to Los Angeles with the expectation of earning money and sending it back to their families in their home countries. It also is possible that geographical distance may be an indication of emotional distance; that is, the homeless who do not live near their relatives are less likely to have strong ties to them.

Based on the multivariate estimates, the baseline probabilities of receiving cash, housing, and meals for a black man are 33.6%, 19.6%, and 38.3%. Hispanic males are the most likely to receive financial assistance; the Probit model predicts that 40.5% receive such assistance. However, Hispanic males are not the most likely to receive other forms of assistance. White males are the most likely to receive housing assistance, and black females are the most likely to receive meals. In sum, no racial/ethnic/gender group was least likely to receive social support on all three dimensions.

VIII. SUMMARY AND INTERPRETATION

This paper examines a unique data set on the homeless population in Los Angeles. Almost by definition, the homeless are very needy and have extremely low income. About 25% are mentally ill, almost two-thirds are chronic substance abusers, and 17% are dually diagnosed. A large share have less than a high school education, are divorced, separated, or widowed, and have no health insurance. The

3. All models in Tables 4-5 are re-estimated excluding the variables for months spent homeless because they may be endogenous. The same qualitative results for the effects of the remaining covariates are found.

odds of substantial numbers of homeless persons finding stable housed living arrangements without external assistance are not favorable. So who can the homeless turn to?

The two most common sources of assistance to the homeless are their families and the government. In our sample, nearly two-thirds of the homeless receive cash or in-kind help from their family or friends, with one-third receiving cash assistance; families and friends are an important source of support. However, the fact that someone is indeed homeless is itself a signal that the familial or private social support system has not been fully effective in providing assistance to the homeless person. Perhaps social support did not exist for the homeless prior to becoming homeless, or maybe their family and friends became overburdened by having to persistently provide assistance. For whatever reason, it is clear that private familial support networks are not the sole solution to the problem of homelessness.

Assistance from government programs also is one of the most important sources of income for the homeless, with 58% receiving government transfers. It has been argued that government transfer programs cause a deterioration of the family by providing a disincentive to marry (Hutchens, 1979), causing poor women to have more children than they otherwise would (Plotnick, 1990), and lowering the amount of private social support provided to the needy. But 40% of the homeless are not receiving government assistance and are still homeless; they are not receiving enough familial assistance to allow them to maintain a stable housed living arrangement. Moreover, although the analyses imply that familial cash transfers buffer declines in well-being among the homeless, the size of this effect is very small. A \$200 increase in the income of the homeless decreases the probability of receiving cash assistance from family and friends from 33.6% to 32.0% for blacks, and the effect is not statistically significant for whites.

Taken together, this evidence suggests that many of the homeless are not likely to move out of their predicament by relying on themselves or their families alone. Although receipt of assistance from existing government transfer programs may not be the solution to homelessness, receiving transfers from these programs does substantially increase the economic well-being of the homeless. As a result,

it is important to determine why such a large share of the homeless do not participate in government programs. The evidence from this survey suggests that transaction costs may be an important factor. Future studies should investigate this issue further.

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