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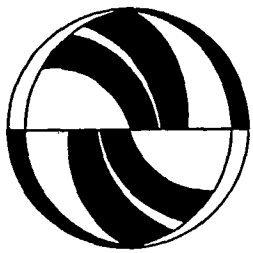
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Working Paper
UCTC No. 19

**The University of California
Transportation Center**

University of California
Berkeley, CA 94720

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**Work and Car Ownership
Among Welfare Recipients**

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*Working Paper
May 1995*

UCTC No. 19

The University of California Transportation Center
University of California at Berkeley

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INTRODUCTION This paper adds to the literature on work and welfare by examining the pivotal role of car ownership in facilitating employment among recipients of public assistance in California. In our automobile-oriented society, being dependent on public transportation significantly disadvantages many of this segment of the poor. As this nation moves forward to restructure the welfare system to promote employment for recipients, it is essential that policies and programs are developed from a sound understanding of the factors that are necessary to finding and holding a job, including the need for car-based transportation.

Welfare reform is enmeshed in what David Ellwood calls a policy conundrum (1988). While the public generally believes that government should provide a helping hand to those who require temporary assistance, they are frustrated by a welfare system that has perpetuated long-term dependency and grown larger over the years. The policy debate has centered around one program, Aid to Families with Dependent Children (AFDC), which was established in 1935 to provide income support to children of widows. AFDC has expanded dramatically since the 1960s, and by the early 1990s, this program covered five million adults and nine million children at a cost of approximately \$23 billion a year (Committee on Ways and Means, 1993). AFDC-FG (Family Group) is the major component. In California, which is the focus of this article, this program contains 87 percent of state's welfare caseload. Nearly all AFDC-FG recipients reside in female-headed households.²

Despite a consensus cutting across political lines that the welfare system should be

² The other component is AFDC-UP (Aid to Families with Dependent Children, Unemployed Parent), which assists children in families with an unemployed parent. Households on this program are largely two-parent families.

restructured to increase employment among AFDC-FG recipients, there remains a heated partisan debate over how to promote greater economic self-sufficiency.³ Advocates on opposing sides differ sharply on time limitations on benefits, the type and amount of support and training services, and the extent and nature of jobs available to those on welfare. Policies and programs, however, should not be based on unrealistic assumptions rooted in ideological polemics but instead be anchored in the employment realities facing welfare recipients. This is not to say that the existing patterns should be perpetuated, but instead our knowledge should be used to identify interventions that effectively encourage and support employment in this population.

One major barrier to employment facing many welfare recipients is their residential location. A disproportionate number are trapped in the inner-city, isolated from the expanding employment opportunities in outlying areas. (Kasarda, 1980; Wilson, 1987) These residents are "spatially mismatched" with the suburbanized jobs and "skills mismatched" with the jobs remaining in the central business districts. Inner-city welfare recipients must compete for relatively jobs, most of which pay low wages. The South Central community of Los Angeles provides one example of the scarcity of jobs in the inner city. This area is home to two-thirds of a million people, most of whom are poor and minority, and is the site of civil unrest in 1992. While 7 percent of the region's population reside in South Central, only 3 percent of the jobs are located there, with a disproportionate number of these jobs paying low wages. (Ong, 1993) The difficulty in finding employment within the inner city is further aggravated by a tendency by outside firms to avoid low-income, minority neighborhoods in their recruitment and hiring of

³ There is also a debate over welfare usage by non-citizen immigrants, and legislation has been introduced to disqualify all but a few in this group.

workers. (Kirschenman and Neckerman, 1991)

Of course, not all welfare recipients reside in job-scarce, inner-city neighborhoods. Two studies find that where one resides has a significant impact on employment. Osterman (1991) finds that in low-income neighborhoods with a high employment rate, which he interprets as a proxy for the availability of jobs, relatively fewer female-headed households are on welfare.⁴ The relationship between the local employment opportunities and welfare usage is a complicated one. Welfare recipients may be more likely to find jobs in areas rich in employment opportunities; however, high employment rates may also be associated with a community norm that stigmatizes welfare usage, thus reducing participation in AFDC. Rosenbaum and Popkin (1991) also find that residential location matters in their analysis of Chicago's Gautreaux program, which helps low-income black families move from public housing into private market housing largely in the suburbs. Among the female heads of household involved in the program, those who had moved to the suburbs were more likely have a job than those who remained in the city. Those who left the inner city stated that the greater number of jobs in the suburbs made it easier for them to find employment.

Residential mobility as a policy option, however, has limitations.⁵ Many in the

⁴The percentage of households with working heads is not the best proxy for determining job rich areas. This measure reflects the employment behavior of individuals and, not necessarily, the actual location of jobs. Moreover, the employment rate is an endogenous variable since a higher employment rate would translate into fewer people eligible for welfare.

⁵ The information in this paragraph comes from remarks made at the workshop on "Urban Poverty and Civil Rights" sponsored by the Leadership Conference Education Fund and held

Gautreaux program experienced difficulties adjusting to their new predominantly white environment and felt isolated from their old social and familial networks. The Department of Housing and Urban Development has made a commitment to supporting residential mobility, but Congress has been less supportive. Moreover, joblessness among welfare recipients is not simply the product of uneven spatial distribution of jobs between suburbs and the inner-city. Many suburban areas are primarily residential communities that are relatively job scarce, yet these neighborhoods do not suffer high joblessness because their residents have the means to commute to distant jobs.

One of the most important realities to understand is that urbanization in the United States has produced a metropolitan structure where long commutes to work are the norm. Nationally, the average one-way commute in 1990 was 11 miles and 20 minutes. (Pisarski, 1992) Interestingly, the average commute time in the major metropolitan areas was slightly lower than the national average. (Rossetti and Eversole, 1993) Solo travel by car is the most widely used means to get to work, accounting for 73 percent of all work trips in 1990. In metropolitan areas such as Los Angeles, where the average commute was 36 minutes and 16 miles, 79 percent drove to work solo. (Commuter Transportation Services, 1993) Even among the working poor, three-fifths majority drove to work alone in 1990. While reliance on driving to work generates huge social costs from congestion delays and pollution, the reality is that our economy has been

April 8 and 9, 1995 at Greenbrier, West Virginia. Mary Davis provided many of the detailed comments. She is Senior Vice President of the Leadership Council of Metropolitan Open Communities, located in Chicago. The Council has played a central role in the Gautreaux program.

structured so that those with access to cars enjoy an advantage. Public transportation can be an effective alternative, but too often it is not for inner-city residents. Minorities in these neighborhoods are more likely to rely on poor public transportation, which seriously restricts employment opportunities. (Taylor and Ong, forthcoming).

Given the sprawling, automobile-oriented urban structure of most U.S. cities, residential mobility, then, is not the only way for welfare recipients to overcome the spatial mismatch. Access to good transportation enables residents to conduct geographically broader job-search, to accept offers farther away from home, to improve work attendance, and to keep the commute burden to a reasonable level. Thus, it is reasonable to hypothesize that car ownership is an important factor in improving the employment status of welfare recipients. The lack of this resource may in fact help explain the observed lack of employment stability among recipients. While there have been a few studies that identify the transportation problems encountered by welfare recipients (e.g., Adame, et al., 1992), there is no known empirical study focusing on the impact of car ownership on welfare and work. This paper begins to fill that gap by analyzing a recent survey of AFDC-FG recipients in California.

The remainder of this paper is organized into four parts. Part two describes the data and analytical methods. Part three presents the major findings for several employment outcomes. Those who owned an automobile enjoyed a sizeable advantage in terms of having a job, hours worked and earnings, even after controlling for other factors. Part four discusses the endogeneity of car ownership and employment, and the related dynamic interaction between the two factors. The data are not rich enough to determine the direction of causality, and it is likely that the relationship between cause and effect varies across individuals and circumstances. The last part

discusses the policy and programmatic implications. Given the evidence showing that automobiles are instrumental to better employment, welfare reform should facilitate the ownership of a reliable car through modifications of eligibility requirements and the creation of support services.

DATA AND METHODOLOGY The data for this study come from a survey sponsored by California's Department of Social Services and conducted by the Survey Research Center at the University of California, Berkeley.⁶ The survey, which was conducted between October 20, 1993 and September 30, 1994, contained over five hundred items, including questions on employment, assets (including car ownership), and travel to work. The sample was drawn from those on welfare on December, 1992. The survey is based on stratified sampling of recipients from four counties, with an over sampling of AFDC-UP cases. Alameda, which contains the city of Oakland, and Los Angeles are highly urbanized counties, San Bernardino County is an

⁶ The survey was a part of an evaluation of the state's Assistance Payments Demonstration Project (APDP), which altered the AFDC (Aid to Families with Dependent Children) program and was implemented in 1992. (Schink and Snow, 1994; Survey Research Center, 1994) The major components of APDP are a 5.8 percent reduction in benefits and implementation of new work incentives. This includes eliminating the four-month limitation on the \$30 and 1/3 income disregard and increasing the needs standard to allow higher earnings. The income disregard is the proportion of the earnings that is not "taxed" by a reduction in benefits, and a higher needs standard raises the earnings threshold that makes a persons ineligible for AFDC benefits. As a part of the federal waiver that allowed California to implement these reforms, the state is required to undertake an evaluation of the impacts of these changes.

urbanizing area east of Los Angeles, and San Joaquin County is a agriculturally based metropolitan area with Stockton as its largest city. The questionnaire was administered over the telephone in English and Spanish, and a total of 2214 interviews were completed.

This paper uses a subsample of the interviews based on the following criteria: (1) the family was on AFDC-FG at the time of the survey, (2) the family was headed by a female, (3) the head of the household was 18 years or older at the time of the survey, (4) the head of the household was either white, Latino or African American, and (5) the head did not have a health problem that prevented her from working. This sample represents the single largest segment of the AFDC caseload and the segment that is at the heart of the policy debate. A total of 1112 observations meet these criteria.⁷ The key variables of interest for this study pertain to car ownership and employment outcomes. Information on car ownership is based on the following question: "Do you own a reliable car?" Over a quarter (27%) of the sample responded positively to this question.

Four employment outcomes are examined. The first is a dichotomous variable indicating whether the respondent had worked anytime during the month prior to the interview or the week of the interview.⁸ Additional information is provided by data on the number of hours worked

⁷ Some of the following analyses use only a subsample of these observations either by design or because of missing data.

⁸There are two relevant questions, one covering employment in the prior month and the other covering employment during the week of the interview. A positive response to either is coded as a "1", and a negative response to both is coded as a "0". This study uses this longer five-week period rather than just one month or one week. Many recipients either rely simultaneously on

during the last month. Earnings data pertain to total pre-tax income for that month, and only observations with reported earnings of less than \$1,600 are used because higher reported earnings may be due to recording errors.⁹ Hourly wage is estimated from reported monthly hours and monthly earnings, and outliers (less than \$1.50 per hour, or greater than \$20 per hour) are deleted. For those with no estimated wage level, hourly wage information for the week of the interview is used when available.

Initial analyses are based on statistical tests of means for those with and without a car, and statistical tests of bivariate distributions. Multivariate analyses are then used because the employment outcomes are influenced by factors other than car ownership. Based on the economic literature on labor and the effects of public assistance¹⁰, this study uses the following set of independent variables: years of schooling, age, the presence of an infant (ages 1 to 2), years on welfare, race, programmatic status,¹¹ the presence of a health problem that "limits the

benefits and work or move frequently between work and welfare. (Bane and Ellwood, 1994; Harris, 1993) Given the sporadic nature of employment among AFDC recipients, this longer five-week period is better able to capture those with at least some attachment to work.

⁹ The maximum allowable earnings for recipients vary by the size of the case household, and is equal to 185% of the minimum budget established by the state. The \$1,600 cutoff used by this paper is roughly the level for a household of five.

¹⁰ For a review of the major studies, see Moffitt, 1992.

¹¹ This indicates whether the respondent was covered by the provisions in California's 1992 welfare-reform legislation or by the older provisions. While most recipients in the state have been covered by the new regulations since 1993, several thousand have remained under the old

kind or amount of work," and county of residence. Time on welfare is calculated for the most recent spell on welfare. It is expected that the presence of an infant or a health problem would hinder job-search and the ability to accept some job offers. On the other hand, greater amount of human capital would lead to more job offers at higher wages, thus increasing the likelihood of being employed. Human capital is captured by years of schooling and age. Given the lack of continuous employment for welfare recipients, this study does not use the calculated potential years of labor market experience, which is commonly used in most empirical studies of labor-market outcomes. County dummies are included to capture variations in the local economic base and level of unemployment.

For all analyses, the weighted results are reported, although the unweighted results are consistent. Logit regressions are used to model the dichotomous employment variable:

$$Pr_i (WORKED) = e^{\beta X} / (1 + e^{\beta X})$$

$$\text{for } WORKED \in (1,0)$$

X is the vector of independent variables described earlier, and beta is the vector of estimated coefficients. Linear regressions are used to model hours worked, monthly earnings, and hourly wages, and the analysis is limited to the observations with non-zero values for the dependent variables.¹² The same set of independent variables is used for both the logit and linear

regulations as a control group to evaluate the impacts of the reforms. For the purpose of the state's evaluation, those covered by the new regulation are classified as belonging to the experimental group.

¹² Although it is desirable to use either two-stage methods or Tobit models, they are difficult to implement because non-zero observations are generated by non-work and by missing or bad

regression models. For earnings and wages, the models were estimated using both the linear and log form of the dependent variable. Although the latter is the standard approach in labor economics, the former is easier for most to interpret. The estimated coefficients reported below are based on the dependent variables reported in dollars, and the findings are consistent with those from the model using the log of the dependent variables.

CAR OWNERSHIP AND EMPLOYMENT OUTCOMES Table 1 presents the average values for the four employment outcomes along with the p-value associated with the relevant test of differences. The figures clearly reveal that those owning a car enjoyed a statistically significant and sizeable advantage for three of the outcome measures. Compared to those without

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 Table 1: Employment Characteristics

	Without Car	With Car	p-value
Worked within last 5 weeks	23%	37%	<.001
Mean hours worked last month	64.4	91.4	<.001
Mean monthly earnings	\$237	\$370	<.001
Mean hourly wage	\$5.74	\$6.41	=.106

Figures are based on those on AFDC-FG at time of Interview.

Hours, earnings and wage are based on observations with non-zero values.

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 a car, the employment probability was two-thirds higher for those with a car, average hours worked was a quarter more, and average monthly earnings were higher by a half. Average

_____ data. Given the difficulties of modeling underlying and highly complex processes that lead to non-zero observations, simpler conditional linear regressions are employed.

hourly wage was only one-ninth higher, and the difference between two means is not statistical significant. One interpretation for these results is that a car can provide access or mobility but cannot impart skills needed for higher wages.

With the exception of hourly wage, the measured advantage held by those with a car remains even after controlling for the set of independent variables discussed earlier. The estimated models are listed in Table 2. The coefficients are largely consistent with the predicted impacts discussed earlier. The presence of an infant was a barrier to holding a job but did not affect the other outcomes. Not surprisingly, health problems depressed both employment probability and hours. The human-capital variables -- years of schooling and age -- had the expected effects of increasing employment and wages. The unreported regression using the log of wages as the dependent variable indicates that each additional year of schooling increased wages by about 3 percent, which is approximately what most labor market studies find for non-welfare populations. Each additional year of age increase wages by a little more than 1 percent, which is on the low side but understandable given the lack of continuous employment and access to on-the-job training for most welfare recipients. While the coefficients for the counties indicate that local economic conditions influence outcomes, the estimates are statistically insignificant. These variables may be too crude to capture the specific labor market conditions most relevant for welfare recipients. Finally, the coefficients for program status denoted by membership in the experimental group are all statistically insignificant. This lack of impact may be due in part to the relatively brief time that the provisions of welfare reforms had been in place at the time of the survey.

Car ownership is highly significant in three of the four reported models -- employment,

hours, and earnings. The estimated coefficients for the logit model can be converted into marginal changes in probability by using the following equation:

$$\Delta Pr/\Delta x = C(p(1-p))$$

where C is the estimated coefficient for variable x, and p is the observed employment probability for the total sample. Using this equation, the estimated impact of car ownership, after controlling for the other independent factors, is 12 percentage points, which is close to the observed unadjusted difference of 14 percentage points. The coefficients from the linear regressions can be interpreted directly, and they indicate that car ownership increased hours worked by 23 hours per month and earnings by \$152 dollars, which are sizeable and statistically significant differences.

The small number of respondents who worked, and therefore had reported earnings and calculated hourly wages, precludes testing the robustness of the positive impact of car-ownership on three of the four outcome measures; however, the total sample is sufficiently large to examine the effect on employment probability for several subgroups. A more restricted logit model was used, which includes only the more statistically significant independent variables (car ownership, schooling, years on welfare, and presence of infant and counties of residence when appropriate). This model was estimated separately for each racial group, each county sample, each group by educational attainment (0-8 years, 9 to 11 years, high school graduates, and those with at least some college education), each group by presence of infant, and each group by time on welfare (0-2 years, 3-5 years, and 6 or more years). Of the 16 logit regressions, every coefficient for car ownership has a positive sign, 11 of the coefficients are statistically significant at the .10 level, and 8 are statistically significant at the .05 level. This indicates a remarkable consistency, and

the lack of statistical significance for some models can be attributed to small numbers of observations for particular subsamples.

Table 2: Results of Multivariate Models

Independent variables	Worked	Hours Last month	Earnings	Hourly Wage
Constant	-2.754***	15.3	119	1.27
Experimental group	-0.225	3.8	-18	-.38
Black	0.270	12.2	115*	.05
Latino	0.242	7.4	98	-.86
Owned car	0.607***	23.4***	152***	-.02
Years of schooling (x10)	0.096***	14.4	8	2.18***
Non-English speaker	0.170	23.7*	-4	-.50
Years on AFDC (x10)	-0.300	-9.6	-26	.81
Age (x10)	0.246***	8.6**	16	.84***
Health problem	-0.439**	-44.4***	-176***	-.45
Infant present	-0.482***	9.8	29	-.19
Alameda county	-0.112	-24.3*	-62	.08
San Bernardino	-0.342	0.9	109*	.57
San Joaquin	0.332	3.9	36	.51
N size	1,110	234	254	218
adj r-sq	n.a.	.147	.073	.163

* p<.10 ** p<.05 *** p<.01

One of the more interesting findings is that car ownership had no effect on hourly wage. In fact, the sign is negative, and the associated probability is .965. Moreover, the estimated coefficient for this variable remained insignificant for both a more parsimonious model (using only car ownership, schooling, years on welfare, age and residence in the two more urbanized counties) and a model using the log form of hourly wages. These findings imply that car ownership is not correlated with some unmeasured individual quality that would effect productivity, and therefore hourly wages.¹³ Consequently, car ownership is not likely to increase the hourly incentives for recipients to work.¹⁴ On the other hand, the findings are consistent with the assertion that car ownership broadens job search geographically and improves job attendance, which would increase the employment probability and hours worked.

Owning a car not only increases monthly earnings, but it also reduces workers' costs in the form of shorter travel time to work. The statistics in Table 3 show that those who did not own a (reliable) car were more likely to take longer commute time.¹⁵ While over a third of this

¹³ Under competitive market conditions, hourly wages are determined the marginal productivity of labor. Productivity here can include both those associated with skills and work effort. Welfare recipients are not likely to work for firms where wages are governed by institutional practices or union rules.

¹⁴ In more technical terms, car ownership does not shift the distribution of wage offers relative to a given reservation wage.

¹⁵ The modal types reported in the table are created by using the responses to the question on owning a reliable car and to the question "How do you usually get to work?" The coded responses for the latter survey item do not distinguish between those who drove to work and

group took 45 minutes or more, only a sixth of the car owners did. A total daily commute of at least an hour and a half is substantial given that many recipients only work part time.¹⁶ The problem of onerous trips is not limited to the commute to work; those without access to cars also faced considerably higher transportation barriers while searching for employment.

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Table 3: Travel Time to Work (one-way)

	CAR OWNER	CAR RIDER	OTHER MEANS
Less than 15 min	38%	52%	14%
15-25 min	33%	41%	27%
30-44 min	14%	7%	21%
45 min +	15%	1%	37%

CHI-SQUARE=24.92, DF=6, P<.001

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THE DYNAMICS OF CAR OWNERSHIP As stated earlier, car ownership is not causally independent of a recipient's employment status. Unfortunately, it is not possible to estimate a structural model because the data set does not contain information on the required excluded variables and because of methodological problems in estimating simultaneous equations

those who rode to work, because there is only a single category that captures both. The first category in the table is comprised of respondents who owned a reliable car, and either drove or rode in a car.

¹⁶For at least some of these workers "part-time" may consist of working only 2 or 3 or 4 days per week and that choice may itself be a reflection of the difficult commute for the non-car owner.

with only dichotomous dependent variables. Ideally, we would have data on geographic and racial variations in the cost of insurance, and inheritance of assets from others or from a divorce. Nonetheless, the data do indicate that those with the greatest employment and earning potential are best situated to becoming a car owner.

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 Table 4: Outcomes by Years of Schooling

Years of Schooling	<u>% With Car</u>	<u>% Worked</u>	<u>% Worked</u>	
			Among those W/O Car	Among those W/ Car
0-8	14%	20%	18%	31%
9-11	22%	22%	19%	32%
High School	27%	28%	25%	36%
Some College	51%	34%	26%	42%

As Table 4 shows, a high earnings potential associated with a high level of educational attainment does not guarantee that a person will be either employed or own a car; nevertheless, both the employment probability and the odds of being an owner increase with years of schooling.¹⁷ Despite this apparent correlation, a further breakdown of the sample by car ownership reveals important differences. The last two columns of Table 4 show that the employment rates for those without a car were consistently lower than that for those with a car

¹⁷ The difference in car ownership between the least educated group and the most educated group is 37 percentage points, while the difference in the employment probability is only 14 percentage points.

across educational levels. This difference indicates that car ownership is not entirely endogenous nor merely an epiphenomenon of more fundamental factors that increase the employment rate. This argument is consistent with the earlier discussion on the robustness of the independent effect of car ownership on employment probability across other subgroups, and with the lack of a correlation between car ownership and hourly wage.

While ownership and employment are causally linked, it is not likely that they occur simultaneously. It is more likely that one precedes the other, setting up a dynamic and cumulative causal interaction. One possible path is from exogenously produced employment to car ownership. The survey data used by this study are not rich enough to test this assertion, even indirectly; however, there is supporting evidence from reverse-commute programs, which are designed to help inner-city residents overcome spatial barriers through subsidized, group-based transportation. (Rosenbloom, 1992) Reports from two programs indicate that after securing employment, some participants were able to purchase a car when it became financially feasible. This action can be interpreted as a sound decision based a rational calculation where the derived benefits outweigh the additional costs. This choice is understandable since the reverse-commute programs rely on time-consuming, group-based modes.¹⁸ Moreover, having a car provides better access to a multitude of activities that improve the overall quality of life.¹⁹

¹⁸ Unfortunately, the extent of this pattern is not known because this report has limited information on the individuals and their employment outcomes, and instead focuses on the operations of the transportation programs.

¹⁹ Car ownership can then have an additional effect employment outcomes because a recipient would have non-employment related needs and incentives to remain gainfully employed.

The data presented in Table 5 suggest another process where initial capital endowment leads to greater disparities in employment with length of time on AFDC. The car-ownership rate is consistent across groups defined by years on AFDC, but the percent who worked is not. Among those with the fewest years on welfare, the employment rate of those without a car who worked is nearly identical to the rate for those with a car. However, the relative differences increase dramatically with length of time on welfare.²⁰ There is a slight decline among those without a car, but there is sizeable increase among those with a car. Further, these figures may underestimate the differences in employment rates between groups because having a car appears to be associated with exiting welfare, particularly during the first year or two on welfare.²¹ Among those who did exit and were on welfare for no more than two years, 42 percent owned a car at the time of the interview, compared to just 27 percent for those who remained on welfare. Unfortunately, we do not know if they owned their own car prior to exiting.

There are limits to imputing longitudinal dynamics to cross-sectional data, but there is a sound theoretical or conceptual reason for the above hypothesis. The higher the direct out-of-pocket costs and the perceived costs of travel time, the less likely a person is to undertake job search, to secure employment, and to remain on the job. As discussed earlier, those without a

²⁰ These differences among long-term recipients remain even after controlling for schooling, years on welfare, presence of infant, and county of residence. Moreover, a logit analysis that included these independent variables shows that there is no statistical difference among short-term recipients.

²¹ The exit rates are based on 156 usable observations of those who were off AFDC at the time of the interview.

car face considerably higher transportation-related barriers. We would logically expect that those facing this high cost would become increasingly discouraged over time.

Table 5: Variations by Years on AFDC

Years On AFDC	<u>% With Car</u>	<u>% Worked Last 5 Weeks</u>	
		Among those	Among those
		W/O Car	With Car
0-2 years	27%	24%	28%
3-5 years	26%	23%	40%
6 or more years	30%	17%	43%

Although there are systematic and causal relationships between employment and car ownership, there are also important exogenous and less predictable factors beyond the control of individuals. Unexpected disruptions in employment due to firm or economy-wide fluctuations and personal crises would undermine the financial ability to maintain ownership. Moreover, car owners may suffer from accidents, thefts and major breakdowns.²² Left without good transportation, their jobs and later their automobile could be in jeopardy. In the precarious world of recipients, these shocks in employment and ownership can produce cumulative outcomes that create greater welfare dependency.

Conclusion Certainly, the above analyses can be improved with additional data. The

²² One could presume that welfare recipients with a car are more likely to be uninsured than the general population. This factor can make a single accident catastrophic for a welfare recipient in terms of retaining ownership and maintaining a driver's license.

cross-sectional nature of the APDP data is less than ideal for analyzing the underlying dynamic relationship between car ownership and employment. What is not known is whether there is a pattern of frequent movement between carlessness and car ownership, the relationship between fluctuations in ownership and employment, and the role of exogenous shocks. More information is also needed on the process of savings that leads to the purchase of an automobile. The analysis of spatial barriers is incomplete because there is no information on the economic base of the local community, the availability and quality of public transportation, and geographic variations in the insurance premiums and other relevant costs.

Despite the limitations of the data and the above analyses, one basic finding stands out, an automobile is instrumental to employment. This major conclusion should not be surprising given that the labor market reflects the sprawling, automobile-oriented structure of modern metropolitan areas. With limited income from welfare benefits, most AFDC-FG recipients are forced to find housing in low-income, inner-city neighborhoods, whose residents suffer from a spatial and skills mismatch. Although the inability to address the simultaneity problem prevents us from determining whether providing an automobile would have an independent and dramatic impact on employment, the evidence is sufficiently strong to argue for welfare policies and programs that facilitate car ownership.

One policy that should be changed is related to the eligibility rules. Existing eligibility requirements for new AFDC entrants prevent an individual from having a car worth more than \$1,500. This policy forces a person with a higher value vehicle to sell the vehicle or exchange it for a less valuable one before qualifying for benefits. The rationale for this regulation is to force individuals to rely first on their assets, but the undesirable byproduct is a class of new

AFDC recipients who are poorly positioned to secure meaningful employment. A \$1,500 vehicle is not likely to be reliable. A sound policy should recognize that a reliable car of reasonable value is not a luxury but rather an instrument to future employment. California's welfare reform moves in the right direction by raising the allowable limit for an automobile from \$1,500 to \$4,500, but this applies only to those already on AFDC.

Policy makers should also consider programs that make it easier for recipients to operate and maintain a reliable car. There are potential net gains to providing training on do-it-yourself maintenance, referrals to reliable and honest automobile repair services, and access to reasonable insurance. Some of this can be accomplished at a low cost through cooperation with vocational training programs related to automobile repair. There should be some assistance given to those encountering temporary needs caused by unforeseen disruptions to employment or major repair problems. This can include providing temporary transportation assistance. Improving the continuity of employment or car ownership can prevent short-term crises from transforming into prolonged joblessness.

Finally, it is worth reconsidering transportation-based programs to overcome the spatial mismatch, with the objective of promoting automobile ownership.²³ Such programs should complement other programs, such as skills training and job development. The importance of

²³ This position is contrary to the effort to discourage commuters from using solo automobile trips. While it is important to encourage car pooling and usage of public transportation, government should not place an additional and unrealistic transportation burden on those on welfare by insisting that they remain transit dependent. This population is already disadvantaged in numerous other ways and is already more likely to use public transportation.

good transportation in aiding the poor is not new. For example, Scholfer and Wachs noted in 1972 that "The importance of convenient, fast, and reliable home-to-work transportation should not be overlooked." (1972, p. 56) This statement is just as true today as it was over two decades ago. While public agencies should not give individual their own cars, these agencies can provide group-based transportation to facilitate job search and to provide a means to commute to work during the first several months of employment. The ultimate goal, however, is independence through both employment and car ownership.²⁴

The above proposals should not be viewed as new entitlements. Instead, they are policies and programs, some of which are relatively inexpensive compared to some existing efforts, that promote the ultimate goal of economic self-sufficiency for welfare recipients.

²⁴ Past evaluations indicate that many transportation-based programs were not successful, the findings are ambiguous because the analyses did not necessarily examine the most appropriate outcome. This point is based on the author's interpretation of the evaluations reported in Rosenbloom, 1992. The evaluations focused on transportation-related operations and usage rates. Consequently, when a participant continues to be employed but shifts from the sponsored group-based transportation to less time consuming travel mode, this is deemed as a failure for the program. It is understandable why transit operators may be concerned with these outcomes, but this approach mistakes a means for the end.

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