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Measuring the Role of Transportation in Facilitating the Welfare-to-Work Transition: Evidence from Three California Counties

Abstract

Welfare-to-work transportation programs are premised on a conceptualization of the spatial mismatch hypothesis that focuses on the physical separation between the central city locations of welfare participants, rapidly expanding job opportunities in the suburbs, and the long commutes needed to connect them. Using data from three diverse California counties, this study examines welfare recipients' spatial access to employment. The study finds that the traditional notion of the spatial mismatch is less relevant to welfare recipients, many of whom live in counties in which the urban structure does not fit the simple model of poor, central-city neighborhoods and distant, job-rich suburbs. Many welfare recipients live in job-rich areas; others live in neighborhoods that are spatially isolated from employment. To be effective, therefore, transportation policies must be tailored to the diverse characteristics of the neighborhoods in which welfare recipients live.

INTRODUCTION

Current welfare programs mandate employment for most recipients and offer temporary financial aid and short-term employment assistance to help welfare recipients make the transition into the labor market. Public agencies must now establish programs to transition recipients off of public assistance and into the workforce or else risk dramatic increases in poverty. Many policymakers have seized on transportation policy as a simple and effective solution to welfare participants' employment difficulties, on the assumption that inadequate transportation is a significant barrier to steady employment for many welfare participants. These assumptions are not unfounded since a number of studies suggest a relationship between access to transportation and employment outcomes among welfare recipients (*1, 2, 3, 4, 5, 6, 7, 8*).

To examine the transportation needs of welfare recipients, a number of scholars and planners have mapped the spatial distribution of welfare recipients, low-wage jobs, and social and employment services in relation to public transit as the means by which to assess welfare recipients' access to both employment readiness services and jobsites and to plan for their transit needs (*9, 10, 11*). These analyses have been conducted in a number of major metropolitan areas including Atlanta (*12, 13*), Baltimore (*14*), Boston (*15*), Chicago (*16, 17*), Cleveland (*18*), Detroit (*1, 19*), Los Angeles (*20*), New York (*21*) and have been useful in identifying neighborhoods with large shares of welfare recipients that are poorly served by public transit.

Despite the growing number of studies on this topic, relatively little analysis has systematically compared and contrasted welfare recipients' access to jobs and public transit across areas with highly differentiated urban structures. The one exception is the review or meta-analysis of welfare-to-work transportation studies in an early report by Pugh (*16*). Therefore, to explore the relationship between urban structure and job access, this study examines welfare recipients' access to jobs and transportation in three diverse California counties—Alameda, Fresno, and Los Angeles. The selection of these three counties allows us to explore the scope and specific nature of mobility challenges for welfare recipients, which we hypothesize vary considerably both within counties (because of neighborhood characteristics) and between counties. Both Alameda and Los Angeles Counties are located in large metropolitan areas. While there are many similarities between these two counties, there are also significant differences. Alameda County is densely developed and has relatively high transit ridership. In contrast, Los Angeles County is more difficult to characterize since it has a wide variety of urban and suburban neighborhoods. We have included Fresno County, located in California's agricultural Central Valley, because we believe the transition from welfare to workforce is equally critical in rural areas and small towns.

In general, we find that the majority of welfare recipients live in job-rich areas. However, there remain neighborhoods in all three counties in which welfare recipients are spatially isolated from jobs and, if employed, must sustain long commutes to distant locations. Job-poor neighborhoods are not an inner-city phenomenon only; they are also part of older, inner-ring suburbs as well as non-urbanized areas. Given the diversity of neighborhood types, we argue that county planners should carefully target transportation policies and services to meet the needs of particular neighborhoods based on the density of welfare recipients, the proximity of suitable employment opportunities, and current

levels of public transportation. We conclude with specific policy recommendations tailored to four neighborhood types.

WELFARE RECIPIENTS AND SPATIAL ACCESS TO EMPLOYMENT

Current policies aimed at increasing welfare recipients' spatial access to employment are largely predicated on the assumption of a spatial mismatch between the residential location of welfare recipients in central cities and job opportunities which are increasingly located in suburban areas. To assess whether welfare recipients face a "spatial mismatch," a number of studies have examined the geographic location of welfare recipients in relation to low-wage jobs, social and employment services, and public transit. Overall, these studies do indeed find that many welfare recipients face a spatial mismatch, although not necessarily a mismatch between central city and suburb. In general, most cities have at least some inner-city neighborhoods where unemployment rates are high and jobs are few; often, welfare recipients live far from employment opportunities, even if these employment opportunities are located in the central city. Further, the studies suggest that the spatial mismatch is more prevalent in metropolitan areas with high levels of residential segregation and inadequate transportation services for reverse commuters, and less relevant in smaller, more centralized metropolitan areas (22).

Other researchers have performed ecological studies as a means of graphically depicting the location of welfare recipients, low-wage jobs, and, frequently, the public-transit service linking the two. The findings of previous studies summarized in Table 1 highlight the diversity in the degree and type of spatial mismatch found within and among U.S. metropolitan areas. In some areas, such as Detroit, welfare recipients experience a distinct central city-suburban mismatch. In other metropolitan areas such as Los Angeles and Philadelphia, welfare recipients experience more localized or neighborhood-level mismatches. In either case, the studies show that at least some welfare recipients in every metropolitan area are spatially isolated from employment and have poor access to existing fixed-route transit. Beyond this general conclusion, it is difficult to compare and contrast these studies since they rely on varying data sources and methodologies, were conducted at different points in time, and included welfare recipients participating in various state welfare programs.

DATA AND METHODOLOGY

This study uses three California counties—Alameda, Fresno, and Los Angeles—to provide a unique comparison across diverse urban settings. Alameda County (located in Northern California) and Los Angeles County (located in Southern California) are each located within two of the 20 largest metropolitan areas in the country. In contrast, Fresno County, located in California's agricultural heartland, is modest in size and includes vast tracts of non-urbanized land. The location of the counties and their welfare usage rates are shown in Figure 1, and Table 1 presents important characteristics of and the salient differences among the three counties.

Alameda County is a part of the large and complex San Francisco Bay metropolitan area. Included within Alameda County are neighborhoods that are both highly urbanized as well as suburban neighborhoods, and both areas of great affluence and concentrated poverty are distributed throughout the county. Despite suburban job

growth, the highest concentration of jobs remains in the central business districts of Oakland (the largest city in Alameda County) and the City of San Francisco. The region benefited from a robust economy throughout the late 1990s that resulted in low unemployment and welfare usage rates and rapidly declining welfare caseloads. Alameda County, compared to other California counties, is more transit-oriented; 10 percent of all commuters use public transit, a figure double the state average and significantly higher than for the other two case-study counties.

In contrast, Fresno County is an agricultural-based county located in California's Central Valley. The county has a diverse urban structure that includes a medium-sized metropolitan area (the City of Fresno) and a mixture of small cities and rural areas. The County is experiencing rapid population growth, has high welfare usage rates, and a racially and ethnically diverse population. Commute distances from the remote areas of Fresno County into the MSA can be lengthy since the county is quite large (approximately 6,000 square miles), and residents are overwhelmingly dependent on automobiles. Sixty percent of residents live in the County's two largest cities (Fresno and Clovis), and the remainder live in small cities and towns scattered around the county (20 percent) and unincorporated, rural areas (20 percent). While 5 percent of California's welfare caseload lives in Fresno County, the 18 Central Valley counties combined contain approximately 30 percent of the state's welfare recipients. Like other resource-based regions, Fresno is characterized by seasonal fluctuations in employment, high unemployment rates, and higher than average poverty and welfare usage rates.

Finally, the highest concentration of welfare recipients, close to 40 percent of the state total, lives in Los Angeles. The county's distinction comes from its large size, in terms of population and square miles, and its complex urban structure. Los Angeles County has 88 incorporated cities, the two largest of which are Los Angeles (population 3.8 million) and Long Beach (population 473,100) (23). The cities are linked together reasonably well by well-developed bus and light rail transit systems. While relatively high, transit ridership in Los Angeles is significantly lower than in Alameda County.

For the analysis, we use geographic information systems (GIS) to map and calculate measures of employment and transportation access for the three counties. These data were used to develop profiles of welfare recipients and their relative access to low-wage jobs and public transportation; we then compare these across the three counties.

The study draws on data assembled from a variety of sources. The California Department of Social Services and local county welfare agencies provided administrative data on welfare recipients for the three counties. These data included residential addresses which were geocoded in order to assign each welfare recipient to a census block group. Using these administrative data, we analyzed the spatial distribution of welfare recipients as well as their population characteristics (race/ethnicity, age, household structure, and education). The welfare recipient data were also matched to administrative data from the California Employment Development Department (their Business Establishment List) to identify employment rates among welfare recipients and to determine the industrial distribution of employment for welfare recipients.

The data on low-wage jobs is from the American Business information (24), a directory produced by a private vendor. The data includes the number of jobs by industry for census block groups. Given the fact that most welfare recipients are low-skilled

women, we estimated the number of low-wage feminized occupations based on employment data from the U.S. Bureau of Labor Statistics on the sex composition of occupations and an occupational and industrial matrix developed by the California Employment Development Department. Using these data, we measured job richness in neighborhoods (census tracts or block groups).

Building from this measure of job access, we examined welfare recipients' relative access to low-wage jobs given their reliance on existing transportation networks. Information on transit lines and bus stops was collected from various local transit agencies. The Metropolitan Transportation Commission (MTC) in the Bay Area and the Southern California Association of Governments (SCAG) provided travel time matrices for Alameda and Los Angeles counties. These data allowed us to calculate how far welfare recipients could travel by either auto or public transit within 30 minutes; to measure job access, we combined these travel distances with the number of low-wage jobs available within a 30-minute radius from neighborhoods with high concentrations of welfare recipients.

THE SPATIAL LOCATION OF JOBS AND WELFARE RECIPIENTS IN ALAMEDA, FRESNO, AND LOS ANGELES COUNTIES

The empirical analysis undertaken in this study explores the mobility challenges facing welfare recipients in three seemingly different counties. In particular, we examine the spatial location of welfare recipients relative to concentrations of low-wage employment. We then analyze how well the transit systems in the three counties connect welfare recipients with employers and thus meet recipients' mobility needs.

The Geography of Welfare Recipients

Like other low-income residents, welfare recipients generally are more concentrated in central-city neighborhoods than in outlying suburbs. In Alameda County, 80 percent of all welfare recipients live in Oakland, the largest and most centrally-located city in the county. In Fresno County, 60 percent of all welfare recipients live in the Fresno-Clovis metropolitan area. The similarly-sized central cities of Oakland (population 365,000) and Fresno (population 404,000) are spatially compact relative to Los Angeles. The data presented in Figure 2 from the Summary Tape File of the U.S. Census shows that in both of these cities over 50 percent of the poverty population live within 6 miles of the downtown area. To travel by bus from the northern reaches of the City of Fresno to Fresno's downtown transit center takes approximately 40 minutes; similarly, travel from East Oakland (the Eastmont Transit Center) to downtown Oakland takes approximately 30 minutes.

In Los Angeles, welfare recipients are also disproportionately concentrated in the central part of the city relative to the total population. However, the sheer size of the county results in a much greater dispersion of the poor in neighborhoods often distant from downtown Los Angeles. As Figure 2 shows, only 31 percent of the poor live within 6 miles of the central business district, the remaining 69 percent are dispersed throughout other low-income neighborhoods, some of them concentrated in the urban districts surrounding Long Beach and others in suburban ethnic enclaves such as Pacoima (a Hispanic neighborhood in the San Fernando Valley) and Monterey Park (an Asian community located east of downtown Los Angeles).

The Geography of Low-Wage Jobs

Given their residential locations, are welfare recipients well-matched to adjacent employment opportunities? Unquestionably, employment growth has, in recent years, been more rapid in the suburbs than in the central cities. Between 1992 and 1997, private-sector jobs grew by almost 18 percent in the suburbs, compared to 8.5 percent in central cities (25). But rapid suburban job growth is not evidence that central cities are job poor, and most central cities still host large shares of employment well-suited for low-wage female workers. During the late 1990s, cities in all regions of the country experienced employment growth. Central-city employment grew at more than five times the rate of the central-city population, with the most rapid growth occurring in the service sector where most welfare participants find employment (25). All of the case-study areas experienced central-city employment growth. Employment grew by more than 6.7 percent in Fresno and Oakland and 1.5 percent in Los Angeles. In Fresno, surprisingly, employment in the central city grew more rapidly than in the suburbs.

Table 3 shows the industrial distribution of employment for welfare recipients in the three counties. As expected, the data show that welfare recipients are highly concentrated in the services and retail sectors, industries that typically employ low-wage female workers. Many of these jobs, particularly in the medium-sized cities, continue to be located close to the central business district. Figure 3 shows the percentage of each county's low-wage jobs as a function of distance from the central business district. In Alameda and Fresno Counties, 38 and 49 percent of the county's low-wage jobs, respectively, are located within 6 miles of downtown. Compared to Alameda and Fresno counties, low-wage jobs in Los Angeles are more dispersed; but still a large percentage of employment opportunities remain in the downtown area or its environs.

NEIGHBORHOODS AND GEOGRAPHIC ACCESS TO EMPLOYMENT

Undoubtedly, welfare recipients' geographic access to employment varies according to their spatial proximity to appropriate job opportunities as well as their mode of travel. Distant jobs that require commutes that are complicated, lengthy and, perhaps, difficult to sustain on public transit may be readily accessible by automobile. Our analysis reveals that each of the three counties contains many neighborhoods with mixtures of jobs and low-income residents. However, each of the counties also has neighborhoods in which welfare recipients live far from concentrations of low-wage employment. The data show that most jobs, even distant jobs, are accessible within a 30-minute commute in a private vehicle. In contrast, access to employment opportunities among transit-dependent recipients is highly variable and is contingent on the neighborhoods in which welfare recipients live and their proximity to employment centers.

Table 4 shows the distribution of welfare recipients across neighborhoods of varying job richness. The job access quartiles were determined using a gravity model to capture the number of accessible jobs located within 3 miles of census block groups. All block groups whose centroids are within a three-mile radius from block group *i* are identified. Given that the probability of a welfare recipient finding employment decays with distance, block groups within one mile are weighted by one and block groups

beyond one mile are weighted by one divided by the square of the distance between the two centroids.

The data show that the majority of welfare recipients in the three counties live in neighborhoods that fall within the top two quartiles in terms of job richness. For example, in Los Angeles and Oakland 53 and 56 percent of welfare recipients, respectively, live in neighborhoods in close proximity to a reasonable number of low-wage jobs. In Fresno County, this figure climbs to over 70 percent. In these job-rich neighborhoods, the larger issue is whether welfare recipients can effectively compete for local jobs since the number of low-wage job seekers tends to exceed the number of low-wage employment opportunities. There is good reason to believe that some welfare recipients will have difficulty competing even in the low-wage labor market since they often have multiple employment barriers that individually and in combination reduce their likelihood of competing successfully for employment (2, 5, 26).

All three of the counties also have neighborhoods in which welfare recipients are isolated from employment. Los Angeles has the highest share of welfare recipients (20 percent) living in such isolated, job-poor neighborhoods and Fresno has the lowest share (10 percent) living in block groups at the bottom quartile in terms of job richness. For welfare recipients living in these areas, jobs are scarce and employment typically requires commuting to job sites located outside of their neighborhoods. In large metropolitan areas like Los Angeles, job-poor neighborhoods are located in both central cities and suburbs. For example, the community of Watts, located 10 miles south of downtown, has a large share of welfare recipients but relatively few jobs and commuting to the job-rich downtown area can take longer than 30 minutes during peak periods (20). Similarly, many suburban neighborhoods in Los Angeles are job poor. Although employment is growing faster in the suburbs than in the central city, with a few exceptions, suburban jobs are highly dispersed. Therefore, welfare recipients living in suburban neighborhoods – such as Pacoima in the San Fernando Valley and Monterey Park to the east – also live great distances from employment, oftentimes without the benefits of the extensive transit infrastructure located in the urban core and typically with less frequent service. In perfect conditions and without transfers, travel by bus across Los Angeles (for example, from Pacoima to downtown) can take well over an hour. To arrive at this figure, we used scheduled transit times to estimate travel times from outlying areas into the downtown area without transfers. Depending on the origin and destination of the trip, the journey may require at least one transfer. Therefore, this method likely underestimates total travel time for many trips.

In Fresno, many of the job-poor neighborhoods are located outside of the urbanized area. Approximately 25 percent of Fresno's low-wage jobs are located in the non-urbanized areas of the county, dispersed throughout approximately 6,000 square miles of small towns and agricultural land. Naturally, job densities tend to be much lower in these rural areas than in the urbanized area. In Alameda County, 18 percent of welfare recipients live in job-poor neighborhoods, many of them located in suburban neighborhoods in the cities of San Leandro and Hayward, south of Oakland.

Even in these neighborhoods of relative job isolation, welfare recipients with access to automobiles can reach many employment opportunities within a reasonable commute time. However, for transit dependents, long-distance commutes may limit their likelihood of finding and sustaining commutes to employment. Table 5 shows the

percentage of low-wage jobs available by mode within a 30-minute commute from areas in Alameda and Los Angeles Counties with high concentrations of welfare recipients. To conduct this analysis, we use data from an origin and destination matrix produced by the two metropolitan planning organizations, the Southern California Association of Governments and the Metropolitan Transportation Commission. These data were not available for Fresno County. The table shows that in all cases, commuting by private vehicle versus traveling by public transit allows residents access to a greater number of low-wage jobs. However, the ratio between the numbers of jobs accessible within a 30-minute commute by car to the number of jobs accessible within a 30-minute commute on public transit varies substantially across neighborhoods. In two Los Angeles neighborhoods—Watts and Monterey Park—this ratio is extremely high, 59 to one and 70 to one, respectively. In Alameda County, the ratios are lower but still substantial: in Hayward and Pleasanton, the ratio between the numbers of jobs accessible by car to that by transit exceeds 20 to one. In these job-poor neighborhoods, cars clearly afford welfare recipients more convenient access to employment opportunities.

The relative advantage of cars shrinks in neighborhoods that are proximate to employment. In Los Angeles, welfare recipients living in two neighborhoods close to downtown—Pico Union to the southwest of downtown and Boyle Heights to the east of downtown—are able to reach a fair number of jobs within a 30-minute commute on public transit. As Table 5 shows, the prospects are even better for welfare recipients living in Oakland where the ratio between job access by auto to that of public transit is less than three to one. In these neighborhoods, public transit may be an effective mode of travel. However, it is likely that some welfare recipients living in these neighborhoods will still prefer to travel by private vehicle. The disadvantages of public transit, particularly for low-income mothers, may include long headways, limited service hours, costs, difficulties using transit to make multiple stops on the way to or from work; and safety issues particularly after dark.

MEETING THE TRANSPORTATION NEEDS OF WELFARE RECIPIENTS

The research suggests that narrowly-drawn conceptualizations of the spatial mismatch hypothesis, those emphasizing the mismatch between concentrations of low-income households in central cities with limited access to suburban employment opportunities, are less relevant to welfare recipients, many of whom live in counties in which the urban structure does not fit the simple model of poor, central-city neighborhoods and distant, job-rich suburbs. The urban structure of the three case-study counties reveals the tremendous diversity of neighborhoods in which welfare recipients live.

Economic, social, and demographic forces differentially shape the welfare and employment characteristics of each of the counties. However, while these broader regional dynamics may influence the number, location, and composition of neighborhoods, they do not alter the fundamental neighborhood characteristics that form the basis for targeting transportation policies to low-income communities. These characteristics include the density of welfare recipients and other low-income households, the proximity of suitable employment opportunities, and current levels of public transportation. Therefore, as Table 6 shows, to address the transportation needs of welfare recipients, policies and services should be targeted to the following four types of

neighborhoods:

(1) *Job-Rich, High Welfare-Density Neighborhoods.* Public transit is most efficient in geographic areas with relatively high concentrations of origins and destinations, in this case, neighborhoods with concentrations of low-income riders and neighborhoods with concentrations of employment opportunities. Therefore, public transit is most effective in job-rich neighborhoods with high densities of welfare recipients where recipients can travel to jobs and other destinations within a reasonable length of time. In such places, policymakers should focus on enhancing existing public transportation services. Enhancements might include adding bus routes in areas with limited service, increasing capacity by adding additional vehicles and shortening headways, and adding off-peak service to better accommodate night and weekend work schedules as well as non-work travel.

(2) *Job-Poor, High Welfare-Density Neighborhoods.* In many job-poor neighborhoods, even if welfare recipients could easily walk to a bus stop and board a bus, they would not get to their destinations within a reasonable amount of time because of lengthy transit travel times. Suburban employment centers, such as the Warner Center in Los Angeles' western San Fernando Valley and industrial employment sites on the urban fringe, provide potential entry-level employment opportunities for recipients, but such locations are often located great distances from places with concentrations of welfare recipients. For those recipients, it is important to establish services that ease the burden of long-distance commutes. In these neighborhoods, welfare recipients would benefit from programs to increase their access to automobiles and programs that provide non-fixed route transportation services. Welfare recipients in these neighborhoods would also benefit from public policies that are not directly transportation-related but may serve to improve employment access among welfare recipients. For example, local economic development can be used to increase economic opportunities in areas of concentrated poverty.

(3) *Job-Rich, Low Welfare-Density Neighborhoods.* In these neighborhoods, policymakers might examine the feasibility of enhancing housing mobility for welfare recipients. This approach should include programs to make it easier for recipients to move close to employment centers if low-cost housing is available, or if none is available, to establish programs that encourage developers to provide new low-cost housing.

(4) *Job-Poor, Low Welfare-Density Neighborhoods.* In job-poor neighborhoods where there are few welfare recipients, it is likely that cars are the best and most efficient transportation option. For example, in the non-urbanized areas of Fresno County or the outer suburbs in the northern part of Los Angeles County, both jobs and welfare recipients are less concentrated, making travel much more difficult for those without access to automobiles. The data show that spatial access to employment remains relatively high among welfare recipients living in these areas since many have reliable access to personal vehicles. In contrast, although they are few in numbers, transit-dependent welfare recipients living in these areas have only limited access to employment opportunities within a reasonable commute distance. From a policy perspective, therefore, the principal challenge to policymakers is how best to serve the transit-dependent rural population who are few in number and widely dispersed. While

perhaps politically problematic, facilitating access to reliable automobiles may be the most cost-effective approach for these welfare recipients.

Moreover, our recommended policies highlight the important distinction between *automobile access* and *automobile ownership* among welfare recipients. For example, many welfare recipients commute by car; however, often they do not have unlimited access to reliable vehicles since many borrow vehicles or carpool. We found this to be the case in Fresno County. Also, many welfare recipients share vehicles with other adults in the household and, therefore, cannot use cars whenever they may need. Finally, many welfare recipients drive old and unreliable cars and have difficulty maintaining and insuring their vehicles. These auto-related problems may make the daily commute to work problematic.

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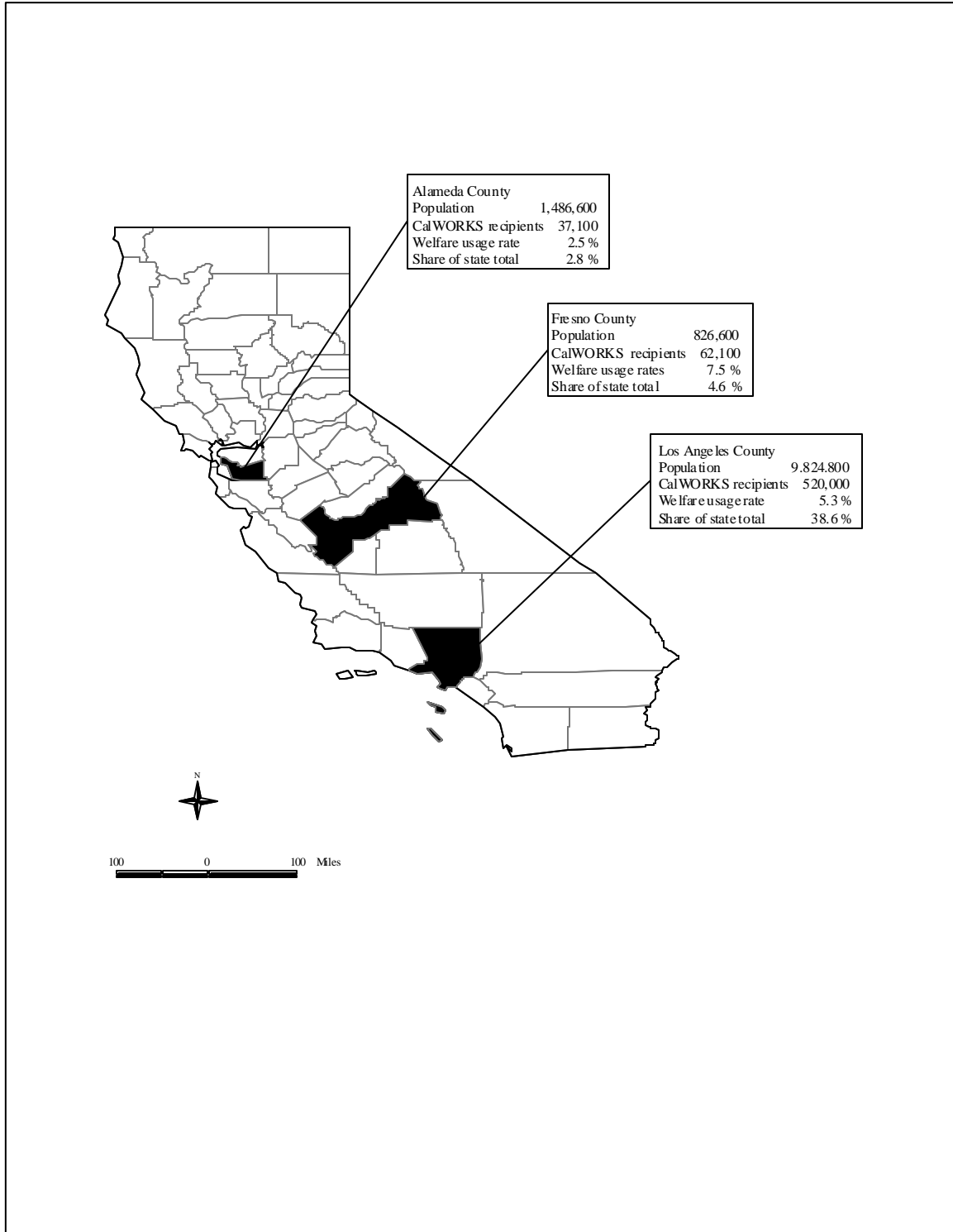


FIGURE 1 Three California Case-Study Counties.

TABLE 1 Previous Studies of Welfare Recipients' Access to Employment

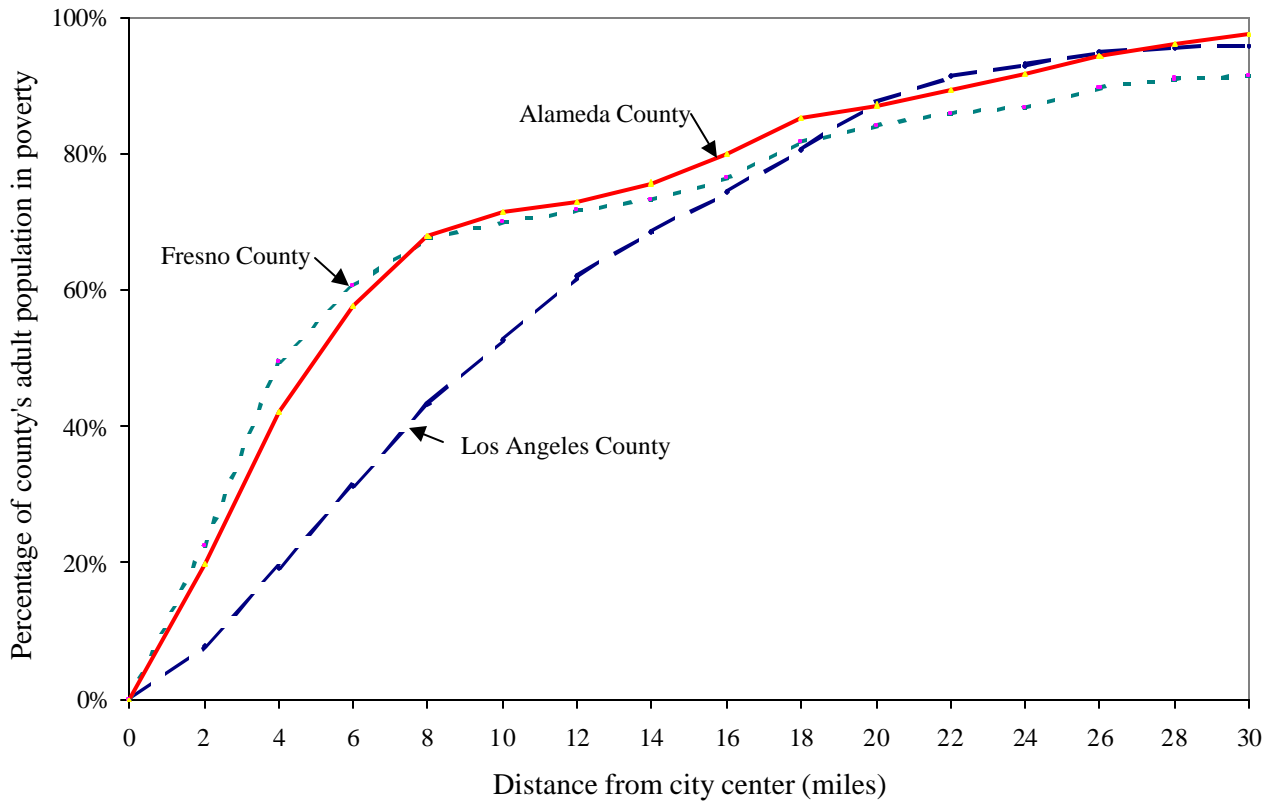
City-Region (references)	Spatial Mismatch	Type of Spatial Mismatch	Access to Public Transit
Alameda County, CA (4)	Variable	Variable	Variable
Atlanta, GA (12, 13)	High	Central City-Suburb; Suburb to Suburb	Low
Boston, MA (15)	High	Central City-Suburb	Low
(27)	Variable	Neighborhood	na
Chicago, IL (17, 16)	Medium	Central City-Suburb	High
Cleveland, OH (18)	High	Central City-Suburb	Low
Detroit, MI (1, 19)	High	Central City-Suburb; Suburb-to-Suburb	Low
Los Angeles, CA (20)	Variable	Neighborhood	Varies by neighborhood
Milwaukee, WI (16, 28)	High	Central City-Suburb	Low
Philadelphia, PA (16)	Medium	Neighborhood; Inner-city gaps	Low
St. Louis, Missouri (19)	Low	1.9 jobs in the city for every employed city resident	na

TABLE 2 Key Characteristics of Case-Study Counties

County	Alameda	Fresno	Los Angeles
Characteristics	Northern California	Central California	Southern California
County type	Urban	Agricultural	Urban
Number of cities	14	15	88
# of cities > 200,000 population	2	1	3
Welfare Participation (2002)			
Percentage of state caseload	3 %	5 %	39 %
Welfare usage rate	2.9 %	7.5 %	5.3 %
Percent decline in caseloads -- January 1998 to December 2001	-50 %	-31 %	-25 %
Population (2000)			
Population and size category	Large 1.4 million	Medium 0.8 million	Very Large 9.5 million
Population growth (1990-2000)	11.4%	16.57%	6.9%
Demographics			
Largest non-white ethnic/racial group	Asian (20 %)	Hispanic (44 %)	Hispanic (32 %)
Economic			
Unemployment rate (2001)	4.5 %	14.7 %	5.3 %
Poverty rate among working-age adults (1990)	9.0 %	17.4 %	13.0 %
Transportation (1990)			
Public transit to work	10 %	1.5 %	6.5 %
Average commute time	26 minutes	19 minutes	27 minutes
Sources: 23, 29, 30, 31, 32			

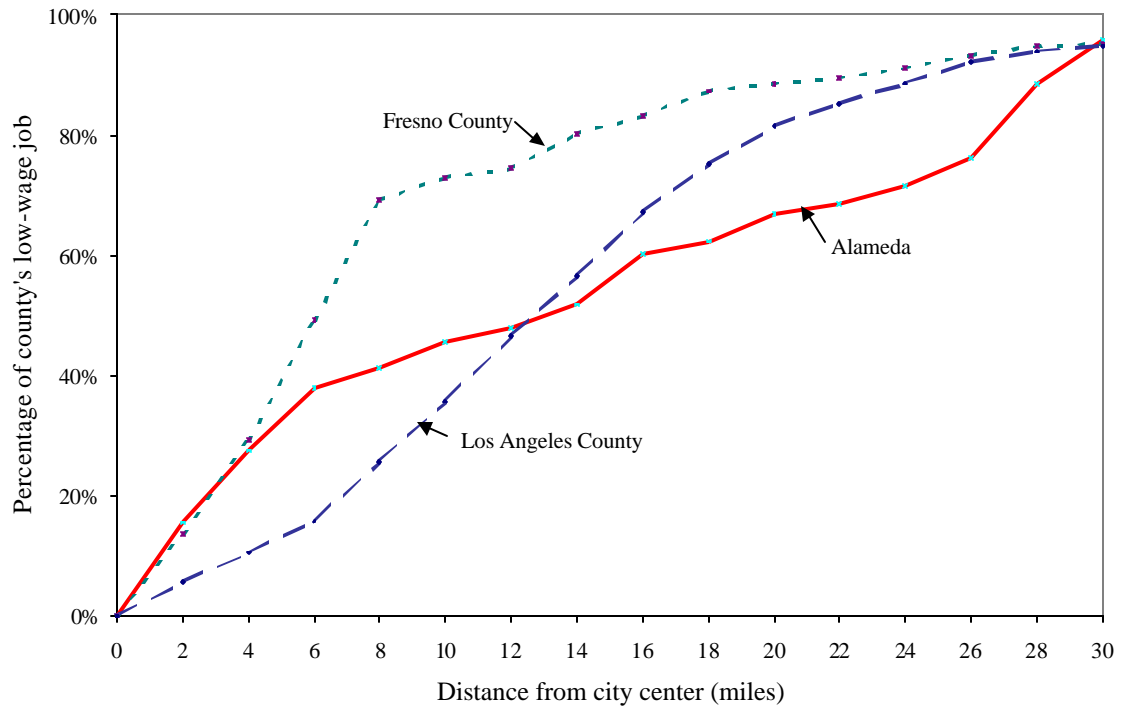
TABLE 3 Industrial Distribution of Employment

	State of California	Alameda County	Fresno County	Los Angeles County
Industrial Sector	Total Employment	Welfare Recipients		
Agricultural	2.8 %	0.7 %	15.6 %	1.2 %
Mining	4.9 %	2.8 %	3.3 %	2.2 %
Manufacturing	13.4 %	4.9 %	9.7 %	9.2 %
Transportation/Communications	5.0 %	5.4 %	2.1 %	3.8 %
Wholesale Trade	5.6 %	3.0 %	2.8 %	4.1 %
Retail Trade	16.6 %	27.1 %	23.6 %	23.9 %
Finance, Insurance, Real Estate	5.7 %	3.6 %	2.6 %	3.5 %
Services	30.5 %	51.3 %	38.7 %	49.6 %
Public Administration	16.6 %	0.9 %	1.3 %	1.8 %
Total Employees	14,395,900	27,413	31,406	206,931
Note: The industrial distribution was produced by merging administrative data on welfare recipients with employment data from the Business Establishment List (BEL).				



Source: U.S. Bureau of Census (1990). Summary Tape File 1.

FIGURE 2 Adult Poverty Population as a Function of Distance from Central Business District.



Source: American Business Institute (2000).

FIGURE 3 Low-Wage Employment as a Function of Distance from the Central Business District.

TABLE 4 Relative Proximity to Employment

	Alameda County	Fresno County	Los Angeles County
Job Access Quartiles	Share of Welfare Recipients		
Job Rich	30%	37%	24%
↕	26%	33%	29%
↕	26%	19%	27%
Job Poor	18%	10%	20%
Total	20,522	26,909	220,164
Note: American Business Institute (2000) census block group employment data is combined with geocoded administrative data of welfare recipients in the three counties.			

TABLE 5 Access to Low-Wage Jobs – Alameda and Los Angeles County Neighborhoods with High Concentrations of Welfare Recipients

Neighborhood	Location	Accessible jobs within a 30-minute commute		Ratio of auto to public transit job accessibility (3)=(2)/(1)
		Public Transit (1)	Automobile (2)	
Alameda County				
Berkeley	North Alameda	31,517	144,644	4.6
Downtown Oakland	Central Alameda	105,557	138,292	1.3
Fruitvale, Oakland	Central Alameda	44,831	124,585	2.8
Hayward	South Alameda	5,665	136,399	24.1
Pleasanton	Southeast Alameda	3,870	112,379	29.0
Los Angeles County				
Boyle Heights	East Los Angeles	93,254	583,730	6.3
Monterey Park	East Los Angeles	5,966	418,581	70.2
Pacoima	San Fernando Valley	7,733	214,255	27.7
Pico Union	Central Los Angeles	118,990	615,700	5.2
Watts	South Los Angeles	8,001	468,561	58.6
Note: Data from the origin and destination matrices developed by the Metropolitan Transportation Commission and the Southern California Association of Governments is combined with data on low-wage jobs from the American Business Institute (1999).				

TABLE 6 Policy Matrix

		Density of Welfare Recipients	
		High Density	Low Density
Density of Employment Opportunities	Job Rich	<ul style="list-style-type: none"> • Fixed-route public transit service 	<ul style="list-style-type: none"> • Housing mobility • Employer-sponsored vanpool or shuttle service
	Job Poor	<ul style="list-style-type: none"> • Private vehicles • Non-fixed route service • Rapid buses, freeway flyers • Local economic development 	<ul style="list-style-type: none"> • Private vehicles