Predatory Profiling:

The Role of Race and Ethnicity in the Location of Payday Lenders in California

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"Study after study has demonstrated that payday lenders are concentrated in communities of color. A drive through minority neighborhoods clearly indicates that people of color regardless of income are a target market for legalized extortion. Payday lending is an economic drain that threatens the livelihoods of hardworking families and strips wealth from entire communities."

Julian Bond, Chairman, NAACP

"Many families rely on short-term credit to see their way through financial emergencies. Unfortunately, the exorbitant rates more often lead families into a cycle of debt rather than a bridge to financial recovery. We need prudent regulation, product innovations and financial counseling to avoid saddling families with debt and making it impossible to save for their future."

Lautaro "Lot" Diaz,
Vice President of Housing & Community
Development, National Council of La Raza

EXECUTIVE SUMMARY

Payday loans trap working households in long-term debt at annual interest rates of over 400 percent. In California and elsewhere, African Americans and Latinos make up a disproportionate share of payday loan borrowers.

Our analysis reveals that the racial and ethnic composition of a neighborhood is the primary predictor of payday lending locations, while playing a very minimal role in explaining the variation in the location of bank branches. As a result, payday lending storefronts are most heavily concentrated in African American and Latino communities. By contrast, the location of mainstream financial service providers such as banks can be largely explained by supply and demand factors such as the presence of retail space.

Specifically:

- Payday lenders are nearly eight times as concentrated in neighborhoods with the largest shares of African Americans and Latinos as compared to white neighborhoods, draining nearly $247 million in fees per year from these communities.

- Even after controlling for income and a variety of other factors, payday lenders are 2.4 times more concentrated in African American and Latino communities. On average, controlling for a variety of relevant factors, the nearest payday lender is almost twice as close to the center of an African American or Latino neighborhood as a largely white neighborhood.

- Race and ethnicity play a far less prominent role in the location of mainstream financial institutions, such as bank branches. While race and ethnicity account for over half of the variation in payday lender location explained by neighborhood factors, they explain only one percent of the variation in bank branch locations.

Payday loans are small, short-term loans secured by a borrower's personal check. The typical two-week payday loan is costly, with lenders allowed to charge up to 459 percent APR. While these loans are advertised as a quick and easy way to deal with an occasional unexpected expense before payday, borrowers have a hard time retiring this debt, taking out one loan after another and becoming ensnared in a long-term debt trap. Because of this, $247 million is drained from California's African American and Latino communities to service payday loans annually.

The payday lending industry depends on this cycle of repeat borrowing for the bulk of its revenues. Nationally, 90 percent of their business is generated by borrowers with at least five loans per year and over 60 percent of business is generated by borrowers with at least 12 loans per year.

> **The Payday Lending Debt Trap in California**
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> - **California payday borrowers take out an average of 10 loans per year.**
>
> - **The industry reports that 84 percent of its business in California is attributable to "repeat customers."**
>
> - **Only four percent of revenues are generated by borrowers with a single loan in a year.**

If payday loans were a helpful product, we might applaud the increased access to credit that these storefronts provide to African Americans and Latinos. However, as the foreclosure crisis spurred on by harmful mortgage lending practices has shown, mere access to credit is not beneficial if it ultimately leaves the borrower worse off. Similarly, payday borrowers typically end up in a harmful borrowing cycle, ultimately paying more in fees than is extended in credit.

To protect consumers from predatory products while preserving a responsible small loan marketplace, California should adopt a comprehensive 36 percent APR small loan rate cap, as 15 states and the District of Columbia have done. In addition to this key protection, California policymakers should employ strategies to help households increase their emergency savings as an alternative to taking on additional debt altogether. While these steps would benefit all Californians, they would especially help African American and Latino households, who make up a large share of payday borrowers.

INTRODUCTION

A payday loan is a small, short-term loan secured by a personal check. Marketed to consumers as a quick and easy solution to dealing with an unexpected expense, these loans are due at the borrower's next payday—generally in about two weeks. To be eligible for a payday loan, a borrower needs only a checking account and a source of income, either from a job or government benefits, such as Social Security. The borrower provides the lender with a personal check for the amount of cash they are receiving that day, plus a fee. On their next payday, the borrower must return to the lender to pay back the loan. If the borrower does not do so, the lender can be repaid by cashing the borrower's personal check. Since many borrowers do not have enough money from one paycheck to pay back their loan and meet their other obligations, they often must take out a new loan shortly after paying off the first, starting a cycle of borrowing.[1]

Officially called deferred deposit transactions, check cashers were first authorized to advance cash against a customer's personal check by a California law enacted in 1996.[2] Borrowers can take out a loan of up to $255 for a $45 fee, equating to a fee of $17.65 per $100. This means that the typical two-week payday loan in California carries a 459 percent annual percentage rate (APR).[3] By the end of 2006, there were nearly 2,500 payday lenders located throughout the state making $2.5 billion in payday loans a year.[4]

Payday borrowers are disproportionately African American and Latino

In California and elsewhere, a disproportionate share of payday borrowers come from communities of color.[5] The California Department of Corporations recently released a survey of payday borrowers showing that, while they represent about a third of the overall adult population, over half of payday borrowers are African American or Latino.

This disproportionate market share is even more significant in light of the fact that African Americans and Latinos are much less likely to have a checking account than whites—a basic requirement for getting a payday loan. The Federal Reserve's Survey of Consumer Finances found that 19.4 percent of non-white households do not have a bank account, compared to less than five percent of whites.[6] Since nearly one in five adult African American or Latino residents are not even eligible for a payday loan, it is striking that they make up such a large share of borrowers. Table 1 demonstrates that while less than five percent of payday loan-eligible adults in California are African American, they make up 18.7 percent of all payday borrowers. Similarly, 25.6 percent of payday loan-eligible adults are Latino, but they represent about 37 percent of payday borrowers. In contrast, white borrowers represent 44.5 percent of the eligible population, but just 36 percent of borrowers.

While they represent about a third of the overall adult population, over half of payday borrowers are African American or Latino.

Table 1: Disproportionate use of payday loans by African Americans and Latinos

	Percent unbanked	California adult population*	California adult population potentially eligible for payday loan**	Payday loan borrowers
African Americans	19.4%	5.9%	4.8%	18.7%
Latinos	19.4%	31.8%	25.6%	37.0%
Whites	4.5%	46.6%	44.5%	36.1%

*The remaining 8% of payday loan borrowers are Asian, American Indian, Hawaiian/Pacific Islander, or of another race/ethnicity. Analysis of payday loan borrowers and race/ethnicity statistics done by the California Budget Project.[7]

**We assume that adults are only eligible for a payday loan if they have a bank account, since the lender requires a personal check from the borrower to be held as collateral.

Payday lending is destructive to households' well-being

The deregulation of credit has given lenders the incentive to develop new products. In the past, the fact that African Americans and Latinos were being offered these and other loans would be seen as a positive step away from redlining and towards a full "democratization of credit."[8] However, the recent subprime lending and foreclosure crisis has increased awareness that the interest rate and terms on which credit is offered can be as important as the credit itself. As a result, policymakers appear to be more willing to question whether the credit extended is ultimately helpful or harmful. More specifically, there is a renewed focus on a return to ensuring borrowers have the ability to repay loans.

A wide range of research has concluded that while payday loans may bridge a short-term gap, these loans cause longer-term financial harm. While some researchers have posited that the availability of payday loans can be positive for consumers, most of this research draws conclusions from broad state-level outcomes rather than examining the consequences for actual payday borrowers.[9] Analyses reviewing payday borrower data and industry records conclude that: (1) the vast majority of borrowers using payday loans are long-term users,[10] (2) payday lenders are dependent on these long-term users for the bulk of their revenues;[11] and (3) long-term payday loan usage has negative consequences for borrowers, leaving them worse off than they would be otherwise.[12] Finally, emerging payday borrower survey and focus group research indicates that payday loans are more typically taken because of chronic financial shortfalls in which a borrower's expenses regularly exceed their income, rather than specific financial emergencies.[13] This brings into question whether a payday loan—or any type of debt—is the best strategy for borrowers facing such challenges.

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If payday loans have such potential to be destructive to a household's finances, why are African Americans and Latinos more likely to borrow from these high-cost lenders? Do they have characteristics that make them more likely to demand these loans, or do payday lenders intentionally target minority families?

Previous research on payday lending locations

To answer this question, a variety of researchers have examined the patterns of payday storefront locations. These studies have consistently found that payday lenders tend to locate their stores in or near communities of color. In 2005, a Center for Responsible Lending analysis of payday lender locations in North Carolina found that African American neighborhoods have three times as many payday lending stores per capita as white neighborhoods.[14] This disparity was shown to increase as the relative concentration of African Americans grew. An analysis controlling for a variety of other factors demonstrated that this disparity of payday lender locations could not be explained by income levels, homeownership rates, poverty, unemployment, whether the area was urban or rural, age of the population, education level, or gender mix.[15]

Another study, looking at the location patterns of both payday lenders and banks in North Carolina, found similar patterns, with the author noting that after controlling for other variables, "a one percentage point increase in the population that is [B]lack will reduce the number of banks by one percent and increase the number of payday lenders [in a given zip code] by one percent."[16] Likewise, a study of Washington State payday lenders concluded that "payday businesses do intentionally target localities with a high percentage of African Americans."[17]

In response to these findings, payday lenders deny targeting minority neighborhoods. Instead they claim to place their storefronts based on factors commonly used by other retail businesses. They also contend that they locate in areas neglected by mainstream financial institutions, filling a niche for the underserved.

In this paper, we seek to add to this growing discussion of *whether* and *why* the relative concentration of African American and Latino households is a factor that influences the location and clustering of payday lending locations.

We first examine the location of payday lenders, comparing their proximity to, and concentration in, African American and Latino communities relative to neighborhoods made up of primarily white households. To determine if payday lenders are serving areas that banks have neglected, we perform this same analysis on bank branch locations, incorporating neighborhood race and ethnicity to determine whether banks appear to be systematically under-serving such areas. A regression analysis is performed to isolate the effects of racial and ethnic composition from other variables.

Next, we determine the key factors explaining the location of mainstream financial institutions and see whether payday lenders follow the same location model, or if different factors better explain where they locate.

After generally finding that payday lending stores are disproportionately located near and concentrated in and around African American and Latino neighborhoods, we discuss the possible factors that allow payday lenders to flourish even in the presence of mainstream banking alternatives. In part, we hypothesize that the payday lending industry exploits the preferences and fears of underbanked[18] African American and Latino households. Finally, we conclude with policy recommendations.

Hypotheses

The location of financial services firms like payday lenders reflects both the demand for and supply of credit. Firms make decisions on where to locate based on estimates of market potential. While technological advances have the potential to make geography less relevant, physical location remains a paramount consideration for payday lenders. Since payday lenders typically offer identical products at identical prices, the ability to locate close to potential customers is critical. In a survey of California payday borrowers, the leading reason a customer chose a particular store was because they "saw a payday location and went in."[19]

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The effectiveness of marketing and actual usage of a particular product may differ dramatically among various neighborhoods. Therefore, payday lenders likely need to take additional steps to determine which set of neighborhood characteristics increase their chances for success. The central purpose of this paper is to understand how race and ethnicity influence this last determination for payday lenders and how that relationship contrasts with factors influencing the same decision by banks.

Because the close proximity of a payday lending store makes customers more likely to visit, we expect that new payday lending storefronts are more likely to be placed in neighborhoods that are closer to existing payday lenders to compete for the same group of people. Once the concentration of payday lenders saturates to a certain level, newcomers must explore opportunities in other neighborhoods. So, we examine both distance and clustering of payday lending storefronts.

The spatial distribution of payday shops and bank branches are not isolated from each other. In a simplified framework, if they compete for the same group of customers, their location will be determined by the same set of neighborhood characteristics. If, on the other hand, they serve different customers, payday shops might be placed in neighborhoods underserved by traditional financial institutions such as banks and credit unions. This is a simplified framework because it does not differentiate between potential and realized customer bases. One neighborhood may have the same potential customer base for a payday store and a bank branch. However, their realized customer bases may differ in size because—in a given neighborhood—a bank's and payday lender's marketing effectiveness may be dramatically different. In any case, a systematic comparison of the spatial distribution of the two will shed light on these questions.

This comparative study will also provide answers to another question: do payday lenders place their storefronts based mainly on the factors commonly used by other retail financial institutions? If they do, then the same set of factors might explain the location of bank branches. In addition, we can also test whether payday lenders intentionally place storefronts at locations neglected by mainstream financial institutions by including locations of bank branches as an independent variable into the model we use to study the location of payday stores.

Data and Methods

This section summarizes data sources and methods used in the study. For a full treatment, see Appendix 1.

Our data are drawn from the following sources: payday lending storefront data from the California Department of Corporations; data on offices and branches of FDIC-insured banks from the Federal Deposit Insurance Corporation (FDIC); census block group-level data on the number of retail employees from the 2000 Census Transportation Planning package; and census block group-level demographic and economic data from the 2000 Census.

To examine whether California payday lenders tend to locate their stores in or closer to areas with different racial and ethnic compositions, for each census block group we summarize the spatial distribution of all the payday lending storefronts around it into two components: the distance from the center of the census block group to the nearest payday lender and the concentration of payday lenders around the census block group. Census block groups are subsets of census tracts generally consisting of about 1,500 people, which we refer to as "neighborhoods" throughout this paper.

Because the vast majority of payday lenders are located in metropolitan, rather than rural, areas, we limit our final analysis to census block groups with at least 500 persons that are located within the 16 metropolitan statistical areas (MSAs) in California. Of the 2,480 payday lending licensees in California as of October 2007, 2,252 are located within these metropolitan areas. Table A1 in Appendix 1 lists the number of payday lending licensees and the number of census block groups for each MSA, as well as the median distance to the nearest payday lending storefront in each of these metropolitan areas. To make the distance and concentration measurements of different MSAs comparable for our analysis, they are normalized with a zero mean and unit standard deviation by MSA.

To study the factors that influence the location and concentration of payday shops and bank branches, we employ regression models with distance and concentration specified as dependent variables and neighborhood characteristic variables as explanatory variables.

First, we include variables which determine whether households would be eligible for or demand a payday loan. Payday lenders would presumably want to locate in areas where there is not only a sizable population (particularly of adults, who can contract to enter into a loan); they would also want to be near people who are eligible for and demand their product. These demand-side variables are listed below:

- Total population
- % of population age 18 or older
- Median household income
- Poverty rate
- % of population with at least a high school diploma
- Unemployment rate
- Homeownership rate

Second, since payday lending storefronts can only be located in areas with proper zoning and retail space, we control for the total retail employees in the area, which serves as a proxy for the existence of retail centers.

Finally, we explore three additional demographic factors below, which we would not expect to increase eligibility or demand for payday loans to test whether they, nevertheless, are explanatory factors for payday lending location decisions.

- % of the population that is African American or Latino
- % of the population that is non-English speaking
- % of the population that is male (gender)

In addition to these variables, we incorporate the location of bank branches in the models that explore the location and concentration of payday lenders to control for the supply of credit offered by competing financial services providers.

To examine the relationship between the proximity and concentration of the nearest payday lending storefronts and neighborhood characteristics, we created quintiles for each neighborhood characteristic variable and treated them as ordered categorical variables with five orders, namely: low, medium-low, medium, medium-high, and high.

Because the neighborhood characteristics can vary greatly among different areas of California, we construct these quintiles for each MSA to reflect the varying relative feature of the measurements. For example, racial and ethnic compositions can vary greatly among the different metropolitan areas of California. In the Chico-Paradise MSA, there are relatively few African Americans and Latinos in the overall population compared to much of the state. In this MSA, census block groups with African Americans and Latinos making up at least 17.4 percent of the total population have a relatively high minority concentration. In contrast, African-Americans and Latinos make up a far greater share of the population in Los Angeles. Therefore, African Americans and Latinos must make up at least 83.4 percent of the population in census block groups in the Los Angeles-Riverside-Orange County MSA for these neighborhoods to be considered high-minority areas. For full breakdowns of African American or Latino concentration by quintiles for each metropolitan area, see Table A2 in Appendix 1.

Table 2. Breakdowns of African American or Latino concentration by quintiles for the Los Angeles-Riverside-Orange County MSA and Chico-Paradise MSA

MSA	Low	Medium Low	Medium	Medium High	High
Chico-Paradise	0–4.6%	4.6–7.6%	7.6–12.1%	12.1–17.4%	17.4%+
Los Angeles-Riverside-Orange County	0–13.1%	13.1–29.5%	29.5–54.9%	54.9–83.4%	83.4%+

Note: Indicated ranges are inclusive of lower bound and exclusive of upper bound.

For a valid regression model, the observations should be independent from each other. Otherwise, corrections should be made. In our study, census block groups are spatially correlated to each other. For example, if one block group is close to a payday lender, its neighboring block group tends to be close to the payday lender too. Specific steps are followed to correct the spatial correlations between census block groups, which should make the regression models statistically valid. The same type of analysis was repeated with bank branch data.

For more details on methods used and a discussion of the limitations of our analysis, see Appendix 1.

FINDINGS

Finding 1: Payday lenders are nearly eight times as concentrated in neighborhoods with the largest shares of African Americans and Latinos as compared to white neighborhoods, draining nearly $247 million in fees per year from these communities.

A comparison of the distance to the nearest payday store among neighborhoods of varying racial and ethnic composition reveals that payday lenders are located closer to African American and Latino communities than communities that are primarily made up of white households.

Our analysis finds that neighborhoods with the greatest concentration of African Americans and Latinos are about two and a half times closer to the nearest payday lender than neighborhoods with the fewest African Americans and Latinos.

Not only are payday lending storefronts located in or closer to communities of color, payday lenders also tend to cluster in these areas, with more stores in a given African American and Latino neighborhood than a neighborhood with a greater share of white households. Payday lenders are nearly eight times as concentrated in neighborhoods with the largest share of African Americans and Latinos as areas with the lowest concentrations of these groups.

Figure 1 provides an example of this variation between the neighborhoods with the highest and lowest shares of African Americans and Latinos, labeled "African American/Latino" and "white," respectively. Each concentric circle represents a distance from the center of the neighborhood, with the closest ring a half mile away and the farthest ring three miles away. The "African American/ Latino" neighborhood's nearest payday lender is within a half mile of the neighborhood center; while the nearest payday lender to the "white" neighborhood is 1.5 to two miles away. In addition, there are many more payday lenders clustered around African American and Latino neighborhoods.
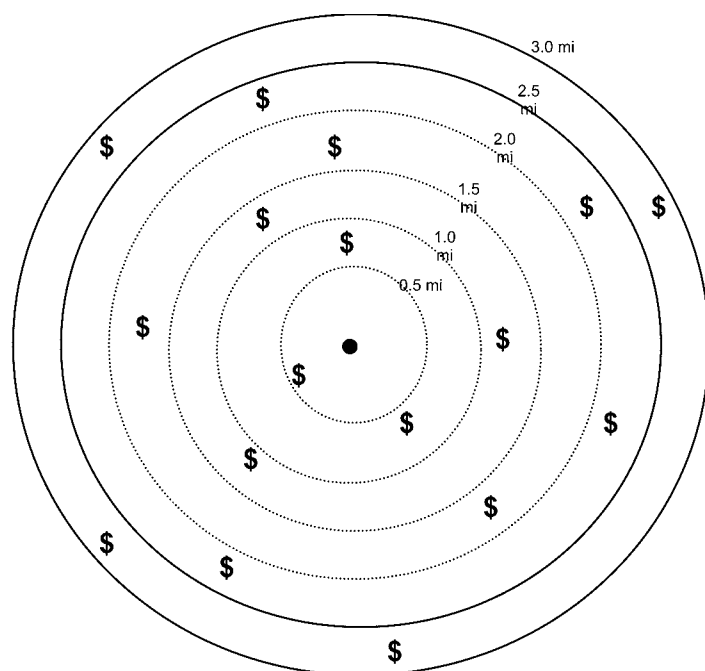
African American/Latino Neighborhood
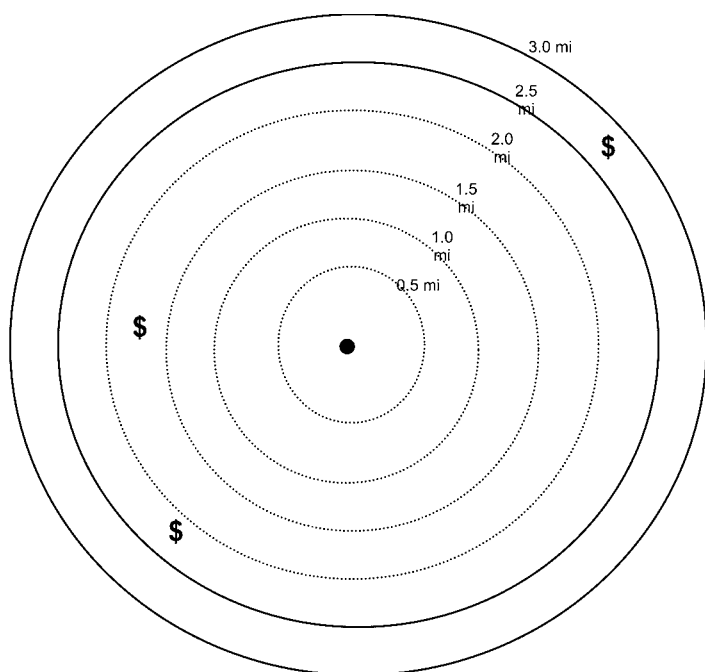
$ = Payday Lending Storefront
• = Neighborhood Center

In order to visualize the "real world" impact of these findings, we can imagine driving through two neighborhoods within a large metropolitan area. The first has one of the highest concentrations of African Americans and Latinos in the area; the second has the fewest. A drive through that first neighborhood would reveal many more payday lending stores in and near the area, as compared to the second neighborhood which is largely made up of white households. The following map shows the greater proximity and concentration of payday lenders to African American and Latino areas in one particular city, Los Angeles. Maps of other cities and metropolitan areas in Appendix 2 provide further illustration of how payday lenders largely cluster in African American and Latino neighborhoods.

White Neighborhood

$ = Payday Lending Storefront
• = Neighborhood Center

Figure 2: Payday lender locations in Los Angeles
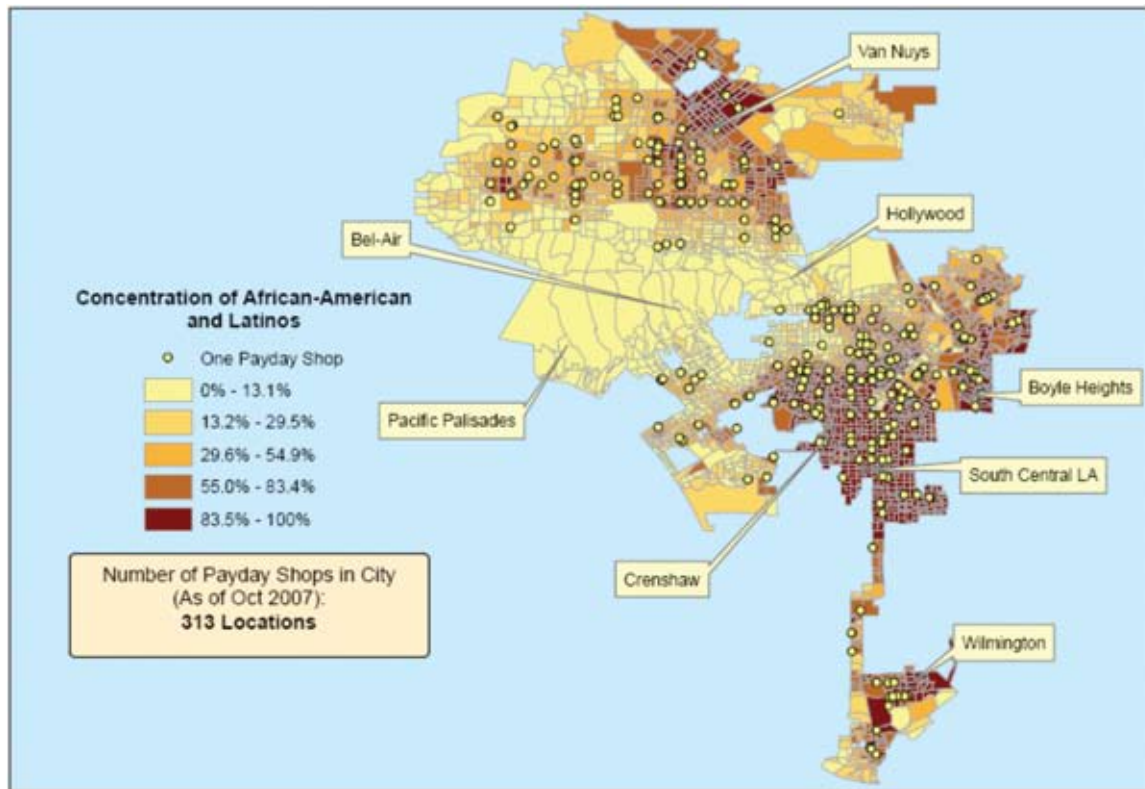
This clustering of payday lending storefronts results in the draining of nearly $247 million in fees from African American and Latino households in California. The Department of Corporations reported that just over 10 million loans were made in 2006, with an average loan size of $254. Since payday lenders can charge up to $17.65 per $100 borrowed, we estimate a fee of $44.83 per loan. Overall, we estimate that over $450 million in payday loan fees are paid annually in California. Because African Americans and Latinos make up about 55 percent of all payday loan borrowers in California, we assume they then pay approximately 55 percent of the fees, or about $247 million a year.

Table 3: Cost of payday loans to African American and Latino households

(A) Average fee per loan	$44.83
(B) Total number of loans (2006)	10,048,422
(C) Total fees paid (A*B)	$450,470,758
(D) Total fees paid by African Americans and Latinos	$246,857,976

Comparing payday lending and bank branch locations

Payday lending advocates often cite the disinvestment of banks and other mainstream financial institutions in communities of color as the reason for payday lenders moving in to these neighborhoods; they claim that while payday borrowers do have checking accounts, they may not benefit from having convenient nearby banking options. However, recent research mapping bank locations has called this assumption into question. For example, research from the Brookings Institution has found that banks and payday lenders generally locate in the same neighborhoods, and 95 percent of payday lenders are located within a mile of a bank or credit union.[20] Overall, the study shows that while payday lenders tend to overwhelmingly locate in lower-income areas, banks and credit unions locate in neighborhoods of all income levels.

Our analysis sheds further light on this issue. If we add up the number of payday lenders within two miles of a neighborhood's center (by adding 1 + 2 + 3 + 3 in the first four columns together, as highlighted below), we find there are nine payday lenders in a neighborhood with highest concentration of African Americans and Latinos, but only one payday lender in a neighborhood with the lowest concentration (as shown below, there are no payday lenders on average between 0-1.5 miles away, and only one 1.5-2 miles away). Turning to bank branch locations, there are seven bank branches within two miles of the center of the highest minority concentration neighborhood, and just slightly more—nine—bank branches within the same distance of the lowest minority concentration neighborhood. Thus, while there are slightly fewer bank branches in African American and Latino neighborhoods, we cannot conclude that these areas lack banks.

Table 4. Spatial distribution of payday lenders/bank branches and neighborhood minority concentrations in California.

	Relative Concentration of African Americans and Latinos in Neighborhood	Median number of payday shops/bank branches surrounding the neighborhood by distance ranges from the neighborhood center					
		0 to 0.5 miles	0.5 to 1 miles	1 to 1.5 miles	1.5 to 2 miles	2 to 2.5 miles	2.5 to 3 miles
Payday Lenders	High	1	2	3	3	4	4
	Medium High	0	1	2	2	3	3
	Medium	0	1	2	2	2	2
	Medium Low	0	0	1	1	2	2
	Low	0	0	0	1	1	1
Bank Branches	High	0	1	3	3	4	6
	Medium High	0	2	2	3	4	5
	Medium	0	2	3	4	4	5
	Medium Low	0	2	3	4	5	5
	Low	0	2	3	4	5	5

Finding 2: Even after controlling for income and a variety of other factors, payday lenders are 2.4 times more concentrated in African American and Latino communities. On average, controlling for a variety of relevant factors, the nearest payday lender is almost twice as close to the center of an African American or Latino neighborhood as a largely white neighborhood.

While the disparity of payday lending locations among various neighborhoods is interesting, we need to investigate the extent to which factors other than race and ethnicity explain the location of payday lenders. We first look at factors that impact household eligibility and demand for a payday loan. For example, payday loan applicants need a source of income, such as a job, so we look at the unemployment rate. In addition, we look at the median household income, poverty rate, and educational attainment, since payday borrowers typically have low- to moderate-incomes, and because higher education levels yield better paying job opportunities. Since homeownership would likely suppress the demand for payday loans because of the availability of other credit options by tapping home equity, we also take into account the homeownership rate. Finally, a payday lender can increase their potential customer base by locating in areas an area with a significant population, particularly those areas with adults (age 18 or older) that can legally contract for a payday loan, so we include these variables. In addition to locating near potential borrowers, payday lenders will also need to be located in a retail area, so we control for the amount of retail space in various neighborhoods by measuring the total number of retail employees.

The other variables we include—gender, race/ethnicity, and non-English speakers—are different in that we would not expect them to impact whether a payday lender would want to locate in a particular area. All else being equal, whether a person is male or female, black or white, or speaking English or another language should not affect their demand for a payday loan. Because of this, it is instructive to see whether these factors which we would not expect to influence payday lender location are significant in our analysis.

Overall, we found that payday lenders tend to locate in closer proximity to neighborhoods with a higher proportion of people of color, renters, adults, lower educational attainment, and non-English speakers. Similarly, payday lenders locate closer to areas with higher rates of poverty, higher rates of retail employees (and thus more retail locations), and higher unemployment. These findings are consistent with the payday lending business model as articulated in many surveys and literature, which notes that payday loans are used more frequently by low- to moderate-income renters.[21]

The full results are summarized in the tables below. Table 5 provides a comparison between the low quintile and other quintiles (medium-low, medium, medium-high, and high) for each variable. If we observe a result of 1.00, we would find no difference between the two quintiles measured. For variables with distance ratios above 1.00, as they increase (increased median household income, for example), the distance to the nearest payday lender increases. Conversely, those variables with distance ratios below 1.00 become closer to the nearest payday lender as they increase, as is the case for African Americans and Latinos. For example, if we look at the variable measuring the share of African Americans and Latinos in a neighborhood, we see that neighborhoods with the highest share of African American and Latinos are about half as far (0.54) from the nearest payday lender, compared to neighborhoods with the lowest share of African Americans and Latinos.
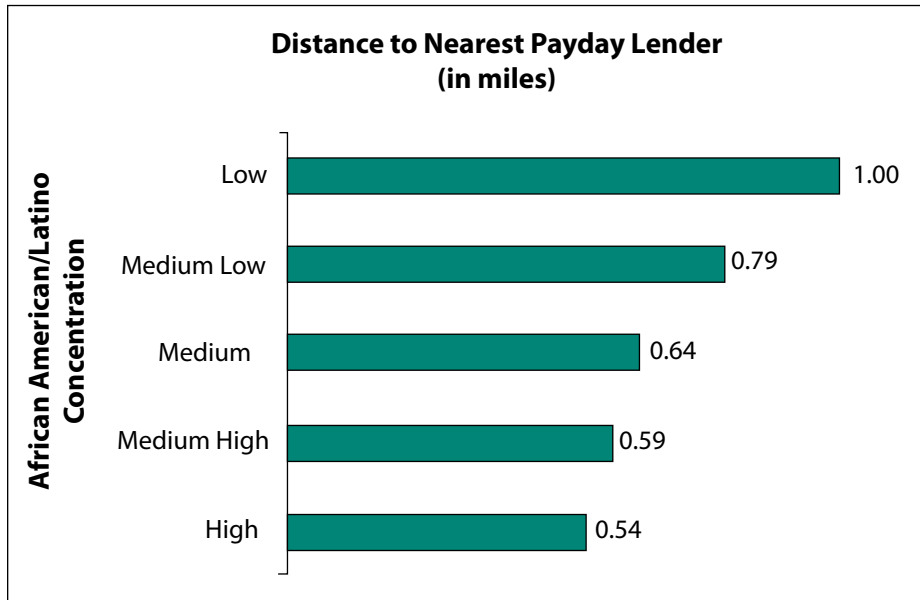
Table 5. Distance to the nearest payday lender: Fixed effect results for mixed regression, controlled for bank branch location

Distance Ratios between two levels of explanatory variables				
Explanatory Variable	High vs. Low	Medium High vs. Low	Medium vs. Low	Medium Low vs. Low
% African American and Latino	0.543***	0.587***	0.643***	0.788***
% Adult Population	0.874***	0.881***	0.907***	0.957***
% Non-English Speaker	0.975	0.944***	0.963*	0.966*
% with High School Diploma	1.427***	1.179***	1.087***	1.045*
Median Household Income	1.211***	1.057*	1.065***	1.079***
% Male Population	1.009	0.994	0.992	1.024
% of Homeowners	1.214***	1.227***	1.234***	1.164***
% Below Poverty	0.891***	0.941***	0.950***	1.01
Total Number of Retail Employees	0.891***	0.897***	0.923***	0.965*
Total Number of Population	1.092***	1.043***	1.057***	1.002
% Unemployed	0.979	0.958**	0.950***	0.979
Bank Branch Distance				1.221***

Note: *= statistically significant at the 95% level ($p \leq 0.05$)
    **= statistically significant at the 99% level ($p \leq 0.01$)
    ***= statistically significant at the 99.5% level ($p \leq 0.005$)

We can also look at this information graphically, broken down by neighborhoods of varying concentrations of African Americans and Latinos. As shown below, the neighborhoods with the lowest minority concentration are a longer distance (one mile away) from the nearest lender, with this distance gradually decreasing to a little over a half a mile away as the concentration of African Americans and Latinos grows.

Figure 3: Miles to the nearest payday lender from the center of neighborhoods with varying African American and Latino concentration, controlling for other demographic and economic variables

Similar to the table above, Table 6 reports the concentration of payday lending locations in the lowest quintile compared to the others. In this case, we see that payday lenders are 2.4 times more concentrated in neighborhoods with the highest share of African Americans and Latinos than those neighborhoods with the lowest share.

Table 6. Concentration of payday lenders: Fixed effect results for mixed regression, controlled for bank branch location

Concentration Ratios between two levels of explanatory variables				
Explanatory Variable	High vs. Low	Medium High vs. Low	Medium vs. Low	Medium Low vs. Low
% African American and Latino	2.442***	2.068***	1.759***	1.316***
% Adult Population	1.161***	1.141***	1.086***	1.023
% Non-English Speaker	1.023	1.088***	1.071***	1.037*
% with High School Diploma	0.660***	0.801***	0.885***	0.942***
Median Household Income	0.852***	0.946*	0.938***	0.913***
% Male Population	0.975	1.009	1.021	0.986
% of Homeowners	0.921***	0.869***	0.846***	0.882***
% Below Poverty	1.214***	1.106***	1.066***	1.008
Total Number of Retail Employees	0.991	1.060***	1.071***	1.030*
Total Number of Population	0.914***	0.961**	0.958***	1.016
% Unemployed	1.056***	1.069***	1.052***	1.02
Bank Branch Concentration				1.545***

Note: *= statistically significant at the 95% level ($p \leq 0.05$)
  **= statistically significant at the 99% level ($p \leq 0.01$)
  ***= statistically significant at the 99.5% level ($p \leq 0.005$)

The table below further summarizes our findings of payday lending storefront concentration:

Table 7. Clustering of Payday Lending Locations

High minority neighborhoods	2.4 times more concentrated than white neighborhoods
Medium-high minority neighborhoods	2 times more concentrated than white neighborhoods
Medium minority neighborhoods	1.8 times more concentrated than white neighborhoods
Medium-low minority neighborhoods	1.3 times more concentrated than white neighborhoods

Because we are modeling results isolating race and ethnicity while holding all other factors constant, we cannot see these findings just by driving through an African American or Latino neighborhood, compared to a white neighborhood. Rather, we have to imagine two neighborhoods that are identical in all but their racial and ethnic compositions. In this context, our model reveals that a neighborhood with large numbers of African Americans and Latinos that is otherwise indistinguishable from a white neighborhood will still have a greater concentration of payday lenders located in or near the area.

In sum, controlling for these other factors, we still find a meaningful disparity in proximity and concentration of payday lending locations. For example, when we compare the neighborhoods with the highest and lowest shares of African Americans and Latinos, we find that African American and Latino neighborhoods have a 2.4 times greater concentration of payday lending storefronts. Also, the nearest payday lender to the center of an African American or Latino neighborhood is located nearly twice as close relative to a neighborhood with the fewest African Americans and Latinos.

A neighborhood with large numbers of African Americans and Latinos that is otherwise indistinguishable from a white neighborhood will still have a greater concentration of payday lenders located in or near the area.

Therefore, we can conclude that payday lending storefronts are located closer to and cluster in neighborhoods with the largest shares of African Americans and Latinos, even when we account for a variety of demographic and economic variables that might otherwise explain the location decisions of payday lenders.

Comparing our results to bank branch locations

Turning our analysis back to the comparison of bank branch and payday lending locations, we again examine the proximity and concentration of bank branches in neighborhoods of varying racial and ethnic compositions—this time controlling for the same demographic and economic variables used in the payday lender location regression model. The tables below shows our full model results for bank branch proximity and concentration.

Similar to our payday lending location analysis, if we observe a result of 1.00, we would find no difference between the two quintiles measured. We observe that the neighborhoods with the highest shares of African Americans and Latinos are only 1.113 times farther away from the nearest bank than neighborhoods with the lowest levels of these groups, once we control for all other variables. In Table 9, we also find small differences in bank branch concentrations in neighborhoods with varying levels of African Americans and Latinos.

Table 8. Distance to the nearest bank branch: fixed effect results for mixed regression

Distance Ratios between two levels of explanatory variables				
Explanatory Variable	High vs. Low	Medium High vs. Low	Medium vs. Low	Medium Low vs. Low
% African American and Latino	1.113***	1.106***	1.088***	1.004
% Adult Population	0.716***	0.785***	0.822***	0.881***
% Non-English Speaker	0.704***	0.811***	0.876***	0.946***
% with High School Diploma	0.935*	0.948	0.948*	0.976
Median Household Income	0.989	0.975	0.988	1.02
% Male Population	1.110***	1.091***	1.053***	1.044***
% of Homeowners	1.701***	1.604***	1.459***	1.243***
% Below Poverty	1.032	0.992	0.988	0.982
Total Number of Retail Employees	0.602***	0.773***	0.899***	0.967*
Total Number of Population	1.265***	1.151***	1.110***	1.060***
% Unemployed	1.041*	1.008	0.984	1.005

Note: *= statistically significant at the 95% level (p≤0.05)
    **= statistically significant at the 99% level (p≤0.01)
    ***= statistically significant at the 99.5% level (p≤0.005)

Table 9. Concentration of bank branches: fixed effect results for mixed regression

Concentration Ratios between two levels of explanatory variables				
Explanatory Variable	High vs. Low	Medium High vs. Low	Medium vs. Low	Medium Low vs. Low
% African American and Latino	0.966	0.879***	0.866***	0.948***
% Adult Population	2.105***	1.732***	1.523***	1.279***
% Non-English Speaker	2.215***	1.698***	1.394***	1.167***
% with High School Diploma	1.218***	1.143***	1.110***	1.064***
Median Household Income	1.272***	1.189***	1.093***	0.982
% Male Population	0.851***	0.873***	0.913***	0.934***
% of Homeowners	0.427***	0.452***	0.526***	0.687***
% Below Poverty	1.057*	1.047*	1.038*	1.024
Total Number of Retail Employees	1.719***	1.311***	1.127***	1.048***
Total Number of Population	0.688***	0.798***	0.843***	0.916***
% Unemployed	0.896***	0.964*	0.991	1.003

Note: *= statistically significant at the 95% level (p≤0.05)
    **= statistically significant at the 99% level (p≤0.01)
    ***= statistically significant at the 99.5% level (p≤0.005)

We find that banks are only slightly farther away from areas with the highest share of African Americans and Latinos when compared to neighborhoods with the lowest levels of these minority groups. We also find that, though there is somewhat greater concentration of banks within areas with the smallest share of African Americans and Latinos, the disparities between these neighborhoods are much less significant than our findings on payday lending store locations. Therefore, we conclude that while a relatively small variance in the proximity and concentration of bank branches between high and low minority neighborhoods exists, race and ethnicity are not an important consideration in the location of bank branches. Finally we observe that a neighborhood's distance to bank locations and the concentration of bank branches are inversely related to the homeownership rate in an area, and are correlated with our retail proxy. This suggests that, all else being equal, banks tend to favor commercial neighborhoods.

Finding 3: Race and ethnicity play a far less prominent role in the location of mainstream financial institutions, such as bank branches. While race and ethnicity account for over half of the variation in payday lender location explained by neighborhood factors, they explain only one percent of the variation in bank branch locations.

Our analyses above show that while payday lenders are concentrated in African American and Latino neighborhoods, bank branches are more evenly distributed among areas of varying racial and ethnic composition. We now examine how each variable described in the previous section contributes to our model. Our analysis shows the extent to which each of these factors predict the proximity to and concentration of bank branches and payday lenders for a particular neighborhood.

First looking at bank branches, those variables with larger F values in Table 10 below, such as the share of the population that are homeowners or the number of retail employees, are far more important factors in explaining the location of banks than those variables with smaller F values, such as the poverty or unemployment rate.

We find that (1) the number of retail employees, which is our proxy for the degree to which the area has retail centers; (2) the area's homeownership rate; and (3) the share of the population which is at least 18 years old (ie: an adult) explain over three-quarters of our bank branch location model.[22]

Table 10. Bank Branch Distance and Concentration, F Values

Explanatory Variable	Bank Branch Distance	Bank Branch Distance
% African American + Latino	10.24 (1.25%)	23.59 (1.21%)
% Adult Population	85.81 (10.51%)	431.24 (22.14%)
% Non-English Speaker	59.50 (7.29%)	304.43 (15.63%)
% with High School Diploma (Educational Attainment)	1.48 (0.18%)	10.83 (0.56%)
Household Income	1.89 (0.23%)	34.86 (1.79%)
% Male Population	14.67 (1.80%)	34.30 (1.76%)
% of Homeowners	190.95 (23.39%)	511.87 (26.27%)
% Below Poverty	1.87 (0.23%)	1.69 (0.09%)
Total Number of Retail Employees	382.88 (46.89%)	420.46 (21.58%)
Total Number of Population	63.83 (7.82%)	160.22 (8.22%)
% Unemployed	3.39 (0.41%)	14.67 (0.75%)

Notes: Numbers inside parentheses are percentages of the total variation explained by each explanatory variable.

This differs markedly from the factors that best explain the location of payday lending storefronts. A small number of variables explain over three-quarters of the variation in payday lender storefront location captured by neighborhood factors in our models: (1) the neighborhood's share of African Americans and Latinos; (2) the percent of the population with at least a high school diploma (educational attainment); and (3) the homeownership rate. The racial and ethnic make-up of the neighborhood alone accounts for over half of the variation in payday lender location explained by neighborhood factors in our models, including two-thirds of payday lender clustering. In contrast, the share of African Americans and Latinos in the neighborhood explains only a little over one percent of the variation in bank branch location.
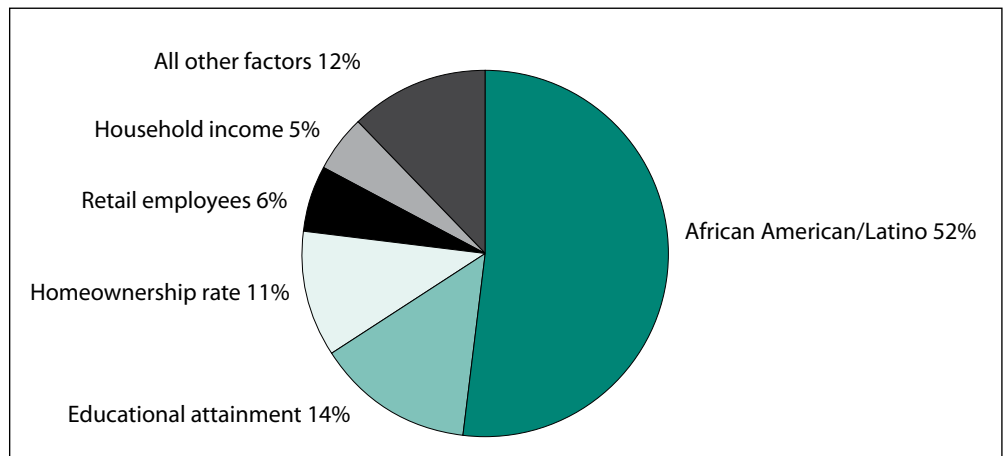
Table 11. Payday Lender Distance and Concentration, F Values

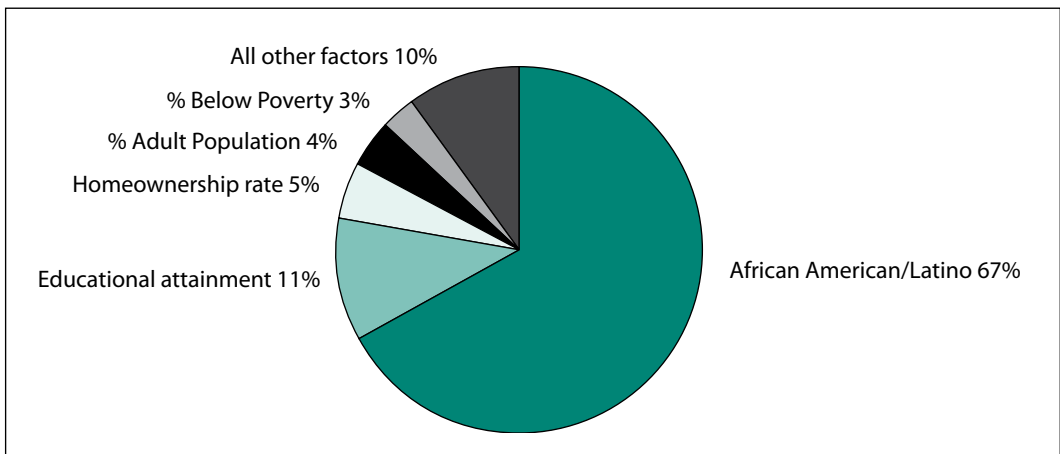| Explanatory Variable	Payday Lender Distance controlled for Bank Branch location	Payday Lender Concentration controlled for Bank Branch location
% African American and Latino	206.98 (51.83%)	382.90 (66.47%)
% Adult Population	18.46 (4.62%)	22.03 (3.83%)
% Non-English Speaker	3.17 (0.79%)	7.91 (1.37%)
% with High School Diploma (Educational Attainment)	57.21 (14.33%)	65.77 (11.42%)
Household Income	21.42 (5.37%)	16.14 (2.80%)
% Male Population	1.61 (0.40%)	2.97 (0.52%)
% of Homeowners	42.88 (10.74%)	29.77 (5.17%)
% Below Poverty	9.19 (2.30%)	18.68 (3.24%)
Total Number of Retail Employees	23.13 (5.79%)	11.18 (1.94%)
Total Number of Population	11.68 (2.93%)	13.57 (2.35%)
% Unemployed	3.59 (0.90%)	5.16 (0.89%)
Bank Branch Distance/Concentration (1STD)	1517.48 (79.17%)	6005.33 (91.25%)

Notes: Numbers inside parentheses are percentage of total model-explained variation attributable to each explanatory variable. While bank branch parenthetically-indicated results relate to proportion of the total explanation, the other variables relate to the total model-explained variation excluding the bank branch variable.

These results are also shown graphically below:

Figure 4: Top neighborhood factors explaining payday lender storefront proximity

All other factors 12%

Household income 5%

Retail employees 6%

Homeownership rate 11%

African American/Latino 52%

Educational attainment 14%

Figure 5: Top neighborhood factors explaining payday lender storefront concentration

All other factors 10%

% Below Poverty 3%

% Adult Population 4%

Homeownership rate 5%

African American/Latino 67%

Educational attainment 11%

In summary, since banks and payday lenders are both financial service providers that offer retail locations for their customers to conduct transactions, we might expect both types of institutions to follow similar patterns in their location decision-making. However, we find that the factors explaining payday lender location are quite different than those which predict bank branch location.

Table 12: Top three neighborhood factors explaining variation in bank location vs. payday lenders

Bank proximity and concentration	Payday lender proximity and concentration
1. Total number of retail employees	1. % African American or Latino
2. Homeownership rate	2. % with at least a high school diploma
3. % of population 18 or older	3. Homeownership rate

DISCUSSION

Our analysis demonstrates that payday lenders cluster in closer proximity to neighborhoods with the greatest concentration of African Americans and Latinos, and that this proximity exists even when controlling for a wide variety of demographic and economic variables. This is likely a key reason that African Americans and Latinos make up a disproportionate share of total payday borrowers. But what leads payday lenders to locate in these areas? In this section, we explore how payday lenders market their product in ways that may be particularly attractive to underbanked African Americans and Latinos, thus causing financial hardship in these communities.

Attracting underbanked African Americans and Latinos to payday loans

The design and marketing of payday loans appeal to the preferences and fears of the underbanked generally, and may be especially attractive to underbanked African Americans and Latinos. Payday lenders market three key features of their loans products: (1) the speed and convenience of getting a payday loan; (2) the assured approval of almost anyone with a checking account and source of income; and (3) the *seemingly* clear pricing of a simplistic, short-term product with no hidden or complex fees. These features are discussed in further detail below.

First, since conventional underwriting—an evaluation of the borrower's ability to repay a loan based on income and expenses—is not done in payday lending, the process is quick and convenient. In a recent survey of the underbanked, the top preference of respondents' satisfaction was timeliness.[23] While the cost of a payday loan ranks among the elements for which payday customers are least satisfied, the ease of taking out a loan is generally the most attractive feature.[24] As noted previously, locating a store near a potential consumer's home can be a key factor in getting them to try an initial loan, since borrowers report that they selected a payday lender after seeing the storefront presumably located in or convenient to an area they already frequent.[25]

Second, payday lenders can take advantage of a borrower's fear of being declined credit elsewhere, whether that fear is real or imagined. Research on perceptions of credit worthiness reveals that African Americans in particular tend to be overly pessimistic about their credit scores, potentially causing them to avoid prime lenders for fear of being denied a loan.[26] Payday lenders also build their customer base by rewarding current customers who refer them to friends and family members, often offering discounts on subsequent loans or other incentives.[27] These referrals from a trusted source are another leading determinant of people trying their first payday loan, ranking just second after the convenience of the location.[28] Getting a friend or family member's recommendation of a payday lender could sway someone weighing a variety of options to visit a payday lending storefront.

Finally, the underbanked population strongly prefers products with clearly stated terms and fees.[29] At least superficially, payday loans are simplistic, with a fixed fee per $100 borrowed for a two-week loan, without any additional charges if the loan is paid back on time. The price structure and marketing of payday loans encourages borrowers to rely on the fee per $100 borrowed to make price comparisons among payday loans and other options rather than more accurately comparing the annual percentage rates (APR). There is evidence that payday lenders de-emphasize the importance of APR. For example, respondents to a variety of surveys typically either could not recall the APR of a payday loan or reported an inaccurately lower rate closer to that of a credit card (20-30 percent APR) when in fact the typical payday loan is at least 10 times more expensive.[30] The result is that the borrower may mistakenly believe that the payday loan is a more affordable product than other available alternatives.

Creating a debt trap for African Americans and Latinos

The fact that payday lenders locate in African American and Latino neighborhoods to conveniently serve financially insecure families may sound simply like a business filling a niche. However, payday lending has a destructive effect on borrowers, and by extension, the communities in which they live.

While borrowers routinely report that they never intended to remain in payday lending debt long-term, the typical borrower is unable to pay back their loan without returning to the payday lender for another. Instead, after paying back the first loan, they often do not have enough of their paycheck remaining to make it through until their next payday, so they must take out a subsequent loan. Knowing this repeated borrowing dynamic is likely to occur, payday lenders often provide incentives for potential borrowers to take an initial loan, often offering the first loan for free or at a substantial discount.[31] California payday borrowers take out an average of ten loans per year.[32] Therefore, once a potential customer is lured into taking a payday loan—perhaps initially attracted by the convenient location and the advertised quickness and simplicity of the product—they become ensnared in the payday loan debt trap.

As noted previously, this repeated borrowing costs African Americans and Latinos in California almost $247 million in payday loan fees annually. The funds drained from these communities by payday lending could be saved or better spent on food, car repairs, medicine, housing, child care, education or other needs.

CONCLUSION & RECOMMENDATIONS

Since payday lenders do not compete on product or pricing, locating a store near people who are more likely to try this service—and then become trapped by repeat borrowing—is critical. We find that payday lenders tend to locate closer to and cluster in African American and Latino communities. Even when controlling for all other variables, race and ethnicity are among the most important factors explaining payday lending storefront locations. Mainstream financial service providers such as banks make their location decisions in a different manner. While they are slightly less likely to be located as close to or in as great of numbers in communities of color than predominantly white communities, the primary factors explaining their location are not tied to race or ethnicity.

Just like subprime adjustable rate mortgages initially seemed like a good deal for homeowners before they quickly became unaffordable, an initial payday loan is easy for a borrower to obtain, but the debt is difficult to ultimately retire.

This clustering of payday lenders results in African Americans and Latinos making up a disproportionate share of total payday borrowers in California. Because of this, their communities pay nearly $247 million to service payday loans each year. This drain on resources is not unlike the subprime mortgage loan crisis, with minority neighborhoods enduring the brunt of foreclosures, lost equity, and diminished property values. Just like subprime adjustable rate mortgages initially seemed like a good deal for homeowners before they quickly became unaffordable, an initial payday loan is easy for a borrower to obtain, but the debt is difficult to ultimately retire.

Policy Recommendation: Enact a comprehensive 36 percent small loan cap to protect borrowers from abusive products such as payday loans.

Our primary policy recommendation to address the abuses of high-cost payday loans is to enact a comprehensive interest rate cap on all small loan products. While a return to a more responsible small loan law would make a difference in the lives of all low- and moderate-income Californians facing financial shortfalls, it would provide particularly important aid to African American and Latino communities that are the most impacted by payday lending practices.

By enacting a rate cap, California would join 15 other states and the District of Columbia which have enacted comprehensive interest rate caps at or around 36 percent APR. Currently, about a third of the U.S. population is protected from loans at triple-digit rates. In some of these states, payday lending has never been legal; in others, payday loans were once made, but—after seeing the effects of high-cost loans on their citizens—policymakers chose to enact a rate cap. North Carolina is one of these states that once had payday lenders, but no longer does. A study of low- and moderate-income households in the state shows that North Carolinians with financial emergencies do not miss payday loans, but instead use a variety of other, often better, alternatives.[33] For example, credit products such as overdraft lines of credit, consumer finance installment loans, and credit card cash advances are used by households facing financial shortfalls in that state.

Similarly, the U.S. Department of Defense brought their concerns about servicemembers' use of payday loans and other high-cost credit to Congress because of the threat this debt was posing to security clearances and deployment schedules. Congress responded by passing a 36 percent APR rate cap for active duty military and their dependents, which President Bush signed into law in 2006. A progress report from the Department of Defense concluded that affordable loan options to the military increased after the cap and that military debt relief societies were able to reduce assistance given to indebted members of the military because of the reduction in payday loan usage.[34]

California could learn from these experiences at the state and national level, crafting an interest rate cap that allows for the continuation of responsible small loan products while discouraging predatory practices.

However, affordable credit products are not the only strategy needed to help households more effectively deal with a financial shortfall. The California Department of Corporations payday borrower survey illustrates that many borrowers are not taking out a payday loan because of a single financial emergency, but instead have expenses that regularly exceed their income.[35] For these households who may not be able to financially handle additional debt burdens at any interest rate, non-credit strategies may be more appropriate.[36]

To this end, efforts to help low- and moderate-income families build emergency savings should also be supported, perhaps through initiatives such as Bank on California. There is some evidence that a lack of savings may make it more likely that households seek out payday loans. For example, the Consumer Federation of America researchers found that families earning $25,000 per year with no emergency savings were eight times as likely to use payday loans as families in the same income bracket that had more than $500 in emergency savings.[37] Some financial institutions with locations throughout the state, such as Golden 1 Credit Union and BBVA Bancomer USA, offer innovative small loan products with built-in savings features that allow people to build up their savings while paying back a loan made on affordable terms.[38] Policies and programs that encourage and facilitate emergency savings among low- and moderate-income households would help alleviate the need for small loans, allowing households facing financial shortfalls to rely on their own savings rather than taking on additional debt.

Certainly, payday loans offered at triple-digit interest rates are not the answer for vulnerable households facing financial challenges. Rather, California should ensure that credit is only offered on reasonable terms, giving struggling families the opportunity to save and begin on a path to a more secure financial future.

Data

We examine whether California payday lenders tend to locate their shops in or closer to neighborhoods with higher concentrations of African American and Latino residents than neighborhoods with predominantly white households. In addition to proximity, we also measure concentration, or the degree to which payday lenders cluster locations in areas with different racial and ethnic compositions.

Our data are drawn from the following sources: payday store data from the California Department of Corporations; data on offices and branches of FDIC-insured banks from the FDIC; census block group-level data on the number of retail employees from the 2000 Census Transportation Planning package; and census block group-level demographic and economic data from the 2000 Census.

Only payday stores recognized by the California Department of Corporations, the entity responsible for licensing, enforcement and regulation of payday lenders, were included in our data. As of October 2007, there were 2,480 stores licensed in the California. The street address of each store was geocoded to determine the store's location and proximity to the nearest census block group.

Because the vast majority of payday lenders are located in metropolitan, rather than rural, areas, we limit our final analysis to census block groups with at least 500 persons that are located within the 16 metropolitan statistical areas (MSAs) in California. The table below lists each MSA in our analysis, along with the distribution of payday lending licensees and census block groups among these areas.

Table A1: Metropolitan Statistical Areas included in analysis

	# of payday lend-ing licensees	# of census block groups	Median distance (in miles) to the nearest payday lender
Bakersfield	63	274	0.706841
Chico-Paradise	18	135	0.760021
Fresno	112	464	0.592127
Los Angeles-Riverside-Orange County	1177	9363	0.675132
Merced	23	100	0.788407
Modesto	46	247	0.65945
Redding	15	48	0.968147
Sacramento-Yolo	161	891	0.710685
Salinas	12	132	1.302811
San Diego	198	1592	0.8289
San Francisco-Oakland-San Jose	301	4126	0.849689
San Luis Obispo-Atascadero-Paso Robles	13	102	0.875223
Santa Barbara-Santa Maria-Lompoc	20	268	1.135657
Stockton-Lodi	48	308	0.670126
Visalia-Tulare-Porterville	33	166	0.823675
Yuba City	12	62	1.000019

Once payday lending stores across the 16 selected MSAs were mapped, we obtained bank branch location data from the FDIC for these areas in order to compare payday lending and bank branch location.

Population data is aggregated at the census block level, the smallest geography covered by Census sample data. California has over 22,000 census block groups with an average population of around 1,500 people per group.

Methods

This section outlines the approach we use to measure the spatial distribution of payday shops or bank branches in a neighborhood, discusses a framework for examining which neighborhood factors might influence the location of a payday shop or bank branch, and lays out the analytical frameworks we use to explore the relationship between neighborhood characteristics and the location of a payday shop or bank branch.

1. Measuring spatial distributions of payday shops and bank branches

For each census block group, we summarize the spatial distribution of all the payday shops around it into two components: the distance from the center of the census block group to the nearest payday shop and the concentration of payday shops around the census block group.

First, each payday shop location is geo-coded with a latitude and longitude. Let $i \in \{1,...,I\}$ be the ith payday shop in MSA k, $k \in \{1,...,16\}$. Let Aik and Bik be the latitude and longitude in radians of the payday shop. Similarly the center of each of the census block groups for the state is geo-coded with a latitude and longitude. Let $j \in \{1,...,J\}$ be the jth census block group in MSA k. Let Cjk and Djk be the latitude and longitude in radians of the census block group. Then the spherical distance between payday shop i and the center of the census block group j can be calculated by

$$E_{ijk} = R \times 2 \times \arcsin\left\{\sqrt{\sin^2\left(\frac{A_{ik} - C_{jk}}{2}\right) + \cos(A_{ik}) \times \cos(C_{jk}) \times \sin^2\left(\frac{B_{ik} - D_{jk}}{2}\right)}\right\} \quad (1),$$

Where R is radius of the Earth, which is about 3956 miles.[39]

Then for census block group j, the spherical distance to the nearest payday shop is given by

$$E_{jk} = \underset{i=1}{\overset{I}{MIN}}\{E_{ijk}\} \quad (2)$$

The concentration of payday shops around census block group j is given by

$$F_{jk} = \sum_{i=1}^{I} 1/E_{ijk}^2 \quad (3)$$

For census block group j, the distance to the nearest bank branches and the concentration of bank branches around the group can be calculated similarly.

2. Normalizing distance and concentration by MSA

To make the distance and concentration measurements of different MSA's comparable, they are normalized with a zero mean and unit standard deviation by MSA. For example, for census block group j in MSA k, the spherical distance to the nearest payday shop was normalized as

$$E'_{jk} = \frac{E_{jk} - \overline{E_k}}{SD_k} \, , \qquad (4)$$

Where $\overline{E_k}$ is the mean distance to the nearest payday shops of the census block groups in the MSA, and SD_k is the standard deviation of the distance.

3. Creating quintiles for neighborhood characteristic variables by MSA

To examine the relationship between the proximity and concentration of the nearest payday lending storefronts and neighborhood characteristics, we created quintiles for each neighborhood characteristic variable and treated them as ordered categorical variables with five orders, namely: low, medium-low, medium, medium-high, and high.

Because the neighborhood characteristics can vary greatly among different areas of California, we construct these quintiles for each MSA that reflects the varying relative feature of the measurements. So, for example, in the Chico-Paradise MSA, census block groups with African Americans and Latinos making up 17.4 percent of the total population is a relatively high minority concentration. In contrast, African-Americans and Latinos must make up at least 83.4 percent of the population in census block groups in the Los Angeles-Riverside-Orange County MSA to be considered high minority areas. For breakdowns of African American or Latino concentration by quintiles for other metropolitan areas, see Table A2 below.

Table A2. Breakdowns of African American or Latino concentration by quintiles for 16 California metropolitan areas

MSA	Low	Medium Low	Medium	Medium High	High
Bakersfield	0-15.5%	15.5-32.5%	32.5-50.7%	50.7-77.7%	77.7%+
Chico-Paradise	0-4.6%	4.6-7.6%	7.6-12.1%	12.1-17.4%	17.4%+
Fresno	0-22.2%	22.2-38.3%	38.3-56.1%	56.1-78.3%	78.3%+
Los Angeles-Riverside-Orange County	0-13.1%	13.1-29.5%	29.5-54.9%	54.9-83.4%	83.4%+
Merced	0-27.0%	27.0-45.0%	45.0-52.8%	52.8-67.8%	67.8%+
Modesto	0-16.5%	16.5-23.9%	23.9-32.9%	32.9-51.1%	51.1%+
Redding	0-3.5%	3.5-5.2%	5.2-6.8%	6.8-10.5%	10.5%+
Sacramento-Yolo	0-8.6%	8.6-15.0%	15.0-23.7%	23.7-39.4%	39.4%+
Salinas	0-7.1%	7.1-21.4%	21.4-49.2%	49.2-81.6%	81.6%+
San Diego	0-9.4%	9.4-16.4%	16.4-32.1%	32.1-55.7%	55.7%+
San Francisco-Oakland-San Jose	0-6.9%	6.9-13.9%	13.9-24.5%	24.5-43.9%	43.9%+
San Luis Obispo-Atascadero-Paso Robles	0-6.9%	6.9-10.5%	10.5-15.2%	15.2-21.2%	21.2%+
Santa Barbara-Santa Maria-Lompoc	0-12.1%	12.1-21.4%	21.4-32.4%	32.4-58.3%	58.3%+
Stockton-Lodi	0-20.8%	20.8-30.1%	30.1-41.0%	41.0-58.8%	58.8%+
Visalia-Tulare-Porterville	0-29.0%	29.0-43.2%	43.2-66.6%	66.6-79.1%	79.1%+
Yuba City	0-13.8%	13.8-19.2%	19.2-25.0%	25.0-31.7%	31.7%+

Note: Indicated ranges are inclusive of lower bound and exclusive of upper bound.

4. Regression models

To study the factors that influence the location and concentration of payday shops and bank branches, we employ regression models with distance and concentration specified as dependent variables and neighborhood characteristic variables as explanatory variables.

First, we include variables which determine whether households would be eligible for or demand a payday loan. Payday lenders would presumably want to locate in areas where there is not only a sizable population (particularly of adults, who can contract to enter into a loan), they would also want to be near people who are eligible for and demand their product. These demand-side variables are listed below:

Total population
% of population age 18 or older
Median household income
Poverty rate
% of population with at least a high school diploma
Unemployment rate
Homeownership rate

Second, since payday lending storefronts can only be located in areas with proper zoning and retail space, we control for the total retail employees in the area, which serves as a proxy for the existence of retail centers.

Finally, we explore three additional demographic factors below, which we would not expect to increase eligibility or demand for payday loans to test whether they, nevertheless, are explanatory factors for payday lending location decisions.

> % of the population that is African American or Latino
> % of the population that is non-English speaking
> % of the population that is male (Gender)

In addition to these variables, we incorporate the location of bank branches in the models that explore the location and concentration of payday lending outlets to control for the supply of credit offered by competing providers from different types of financial service providers.

5. Correcting spatial correlations

In matrix form, the regression model takes the following form:

$$D = X\beta + \varepsilon \quad (5),$$

Where X is the matrix of explanatory variables. Beta is the vector of parameters we would like to estimate, as well as the error term. Here our observation unit is census block groups. Since one block group is spatially correlated with another census block group, the error term is not independent across observations, i.e., the off-diagonal elements of the covariance matrix of the error term are not zero. Since the value of the off-diagonal elements of the covariance matrix depends on the distance between two census block groups, they can be modeled parsimoniously by functions of distance. For the ith row and jth column of the covariance matrix of the error term, we use a spherical spatial covariance structure, which is given by

With,

$$CV_{ij} = \sigma_1^2 + \sigma^2 \left[1 - \left(\frac{3d_{ij}}{2\rho} \right) + \left(\frac{d_{ij}^3}{2\rho^3} \right) \right] 1\left(d_{ij} \le \rho \right) \quad (6),$$

$$1\left(d_{..} \le \rho \right) \text{ equals 1 if } d_{..} \le \rho \text{ and 0 otherwise} \quad (7)$$

Where in geostatistical concepts, σ_1^2, σ^2 and ρ are called nugget, sill and range, respectively. dij is the Euclidean distance between the ith and jth of the observations in the input data set. By adopting the same strategy as used by Kleinschmidt et al., the following steps were used to estimate the mixed regression model with the SAS procedures Mixed:[40]

1). An initial estimate of all the fixed effect was made by assuming no spatial correlation. Residuals were obtained after subtracting model fits from the observed. A variogram was constructed by using the SAS Variogram procedure. Initial estimates of the spatial covariance parameters were estimated using non-linear regression procedure NLIN.

2). Mixed procedure was then used with spatial covariance parameters fixed at the values estimated from step 1.

3). From the Mixed procedure, a new set of estimates of the fixed effects was found; hence, a new set of residuals was obtained, which was used in a new cycle to redraw the variogram and derive new estimates of the spatial covariance parameters from the nonlinear regression.

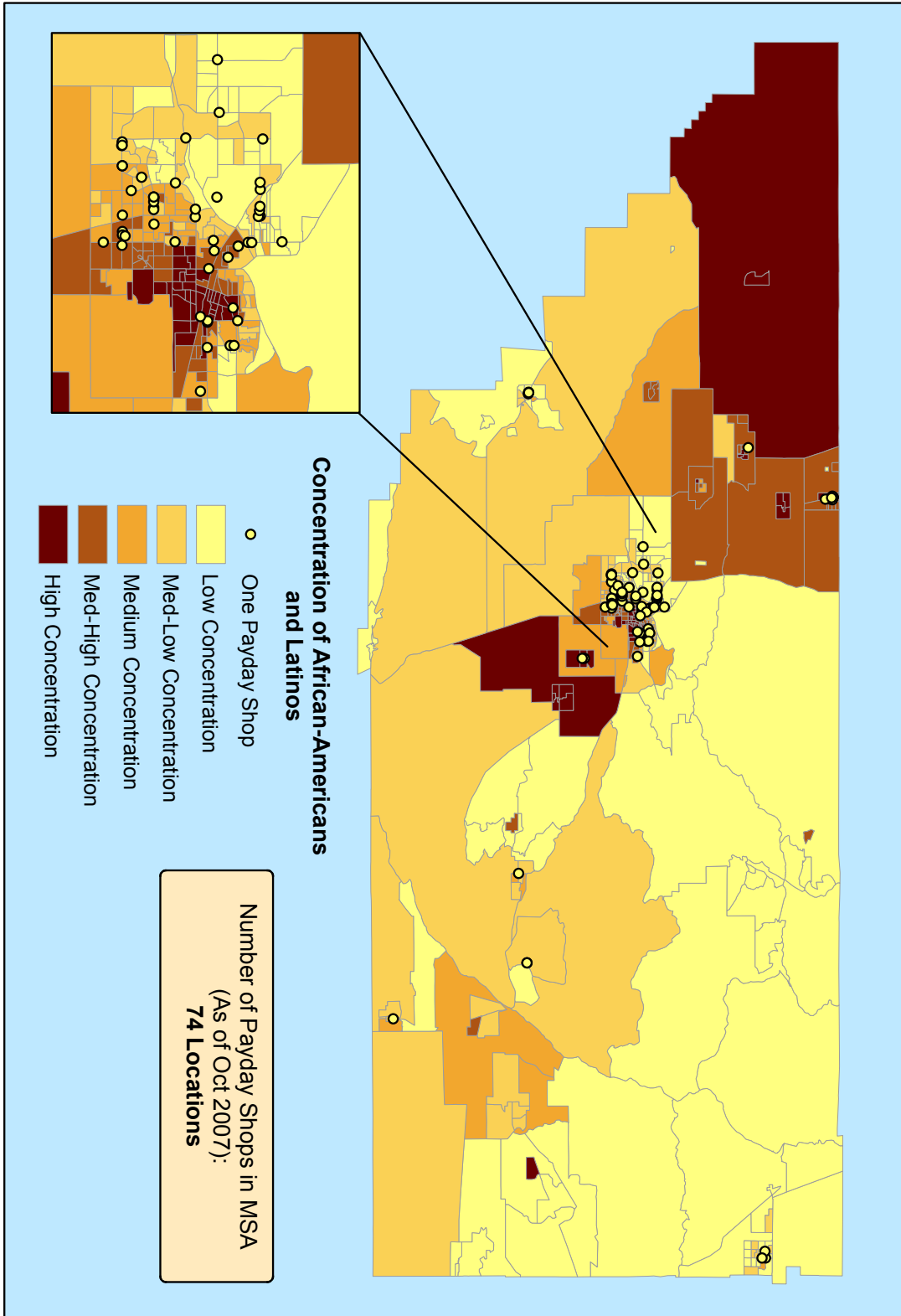4). Iterate step 2 and 3 until there was no further change in the estimates.

What's the effect of the consideration of the spatial correlations? Assuming that any spatial correlation was positive rather than negative, standard errors of the fixed effect estimates might have been underestimated rather than overestimated in a model without consideration of the spatial correlations. Adjustment for spatial correlation may therefore lead to removal of some variables from the model whose contributions were overstated initially, consistent with Kleinschmidt et al.

Limitations

There are some limitations to our study. First, we only include payday lending storefronts which are licensed by the California Department of Corporations. Any lenders operating without proper licensing are not part of our analysis. Second, while we control for a large range of demographic, social, and economic factors, there may be other considerations that impact the location of payday lenders and bank branches for which we have failed to account. In addition, because much of the Census data analyzed for this report is from 2000 it is slightly dated and may need to be verified once the 2010 Census data is released. Finally, while other research from CRL and others has consistently shown that African Americans and Latinos are disproportionately impacted by payday lending, this analysis only considers African American and Latino neighborhoods, bank branches, and payday lending storefronts in California and therefore cannot be used to draw conclusions in other states.

Payday Shop Locations in African-American and Latino Neighborhoods
Bakersfield, CA MSA

Concentration of African-Americans
and Latinos

○ One Payday Shop

Low Concentration
Med-Low Concentration
Medium Concentration
Med-High Concentration
High Concentration

Number of Payday Shops in MSA
(As of Oct 2007):
74 Locations

Center for Responsible Lending
Sources: 2000 U.S. Census; Oct 2007 CA Department of Corporations, Financial Services Division
Note: Racial concentrations are defined in quintiles relative to the MSA.

Payday Shop Locations in African-American and Latino Neighborhoods
Chico-Paradise, CA MSA
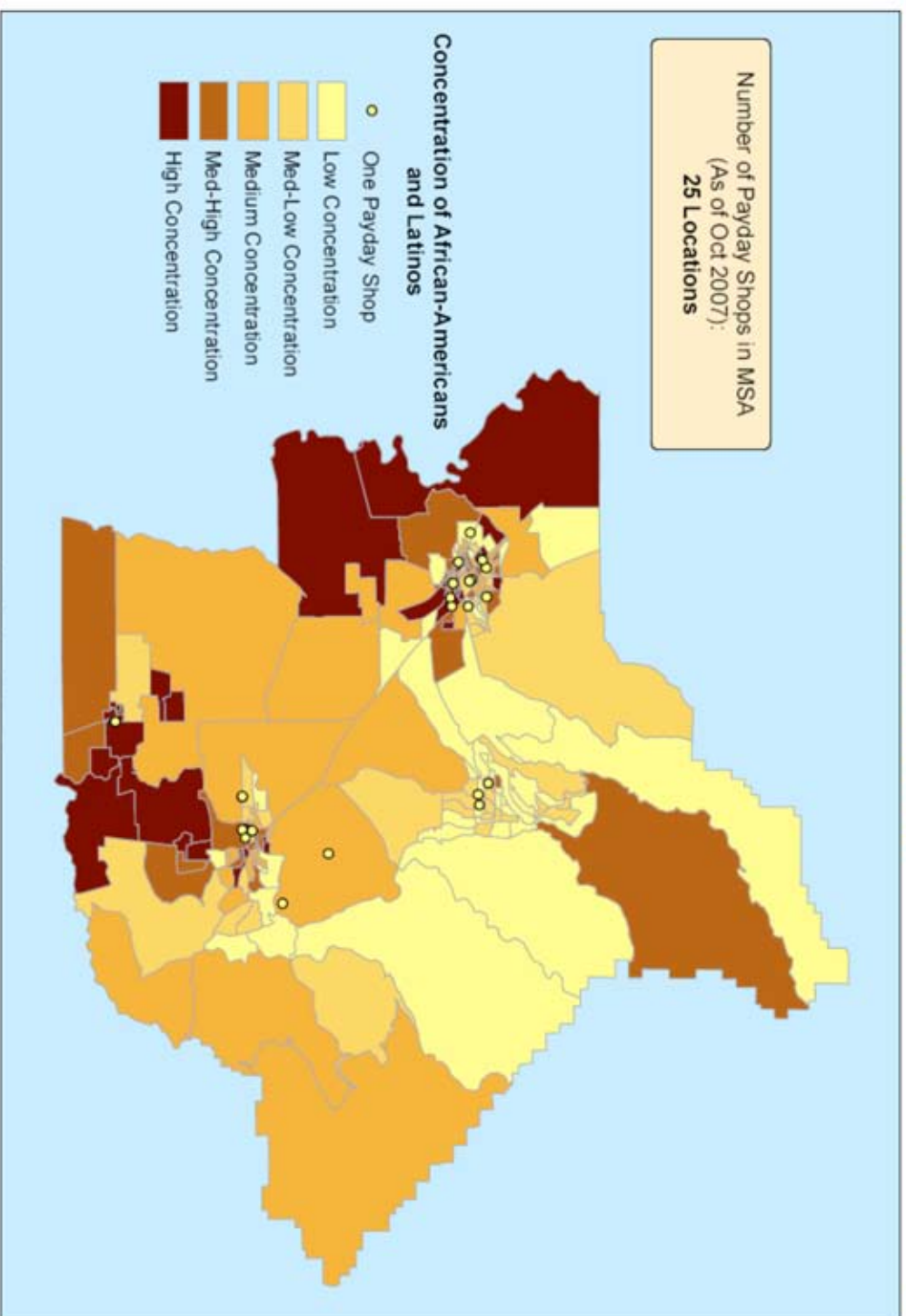
Number of Payday Shops in MSA
(As of Oct 2007):
25 Locations

Concentration of African-Americans
and Latinos

o   One Payday Shop

Low Concentration
Med-Low Concentration
Medium Concentration
Med-High Concentration
High Concentration

Center for Responsible Lending
Sources: 2000 U.S. Census; Oct 2007 CA Department of Corporations
Note: Concentrations are defined in quintiles relative to MSA.

Payday Shop Locations in African-American and Latino Neighborhoods
Fresno, CA MSA

Number of Payday Shops in MSA
(As of Oct 2007):
107 Locations

Concentration of African-Americans
and Latinos

○ One Payday Shop

Low Concentration
Med-Low Concentration
Medium Concentration
Med-High Concentration
High Concentration

Center for Responsible Lending
Sources: 2000 U.S. Census, Oct 2007 CA Department of Corporations
Note: Concentrations are defined in quintiles relative to MSA.

Payday Shop Locations in African-American and Latino Neighborhoods
Los Angeles-Riverside-Orange County, CA CMSA

Number of Payday Shops in CMSA
(As of Oct 2007):
1,212 Locations

Concentration of African-Americans
and Latinos

○ One Payday Shop

Low Concentration
Med-Low Concentration
Medium Concentration
Med-High Concentration
High Concentration

Center for Responsible Lending
Sources: 2000 U.S. Census, Oct 2007 CA Department of Corporations
Note: Concentrations are defined in quintiles relative to MSA
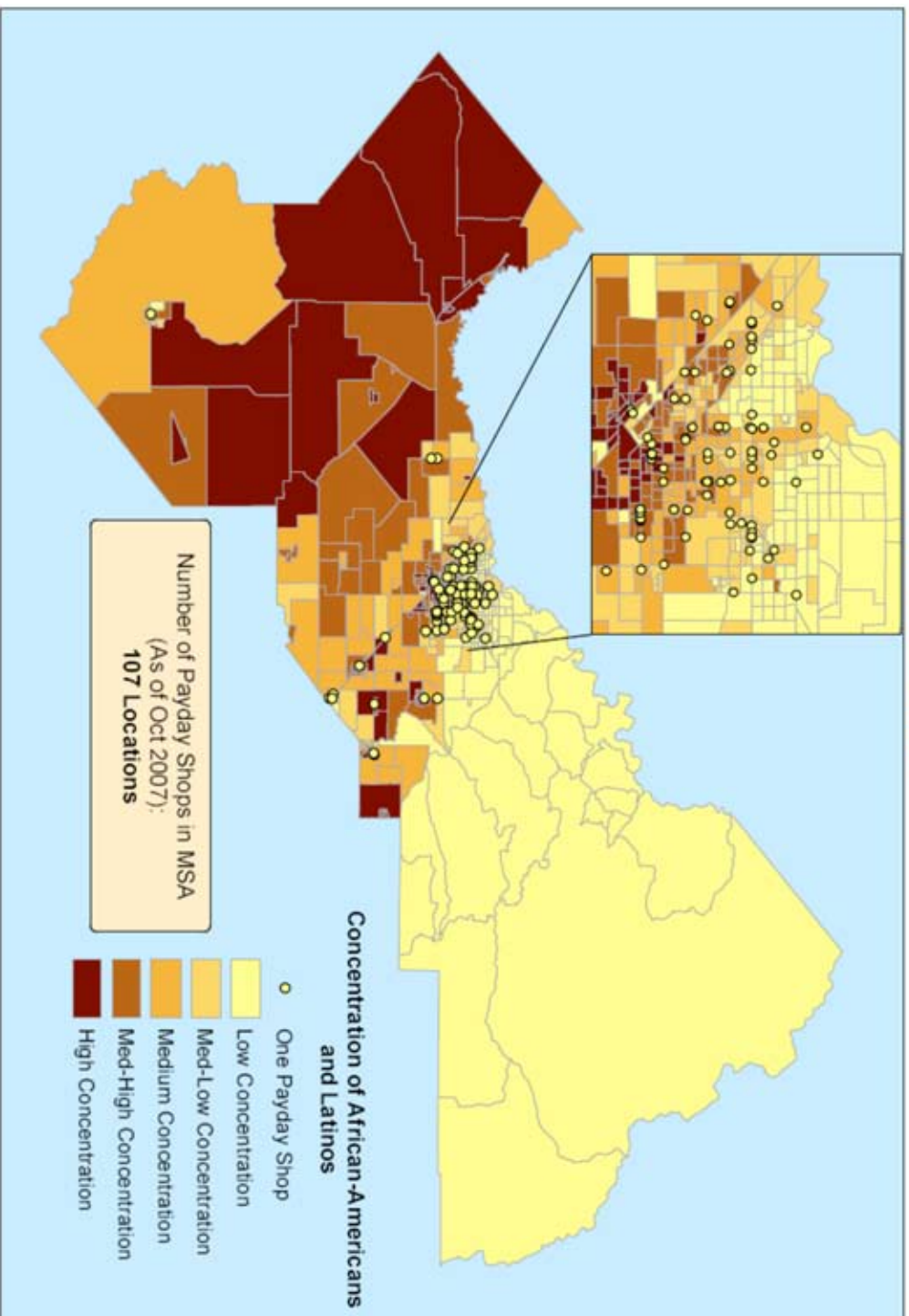
Payday Shop Locations in African-American and Latino Neighborhoods Merced, CA MSA

Number of Payday Shops in MSA (As of Oct 2007): 24 Locations

Concentration of African-Americans and Latinos

○ One Payday Shop

Low Concentration
Med-Low Concentration
Medium Concentration
Med-High Concentration
High Concentration

Payday Shop Locations in African-American and Latino Neighborhoods Modesto, CA MSA

Number of Payday Shops in MSA (As of Oct 2007): 48 Locations

Concentration of African-Americans and Latinos

○ One Payday Shop

Low Concentration
Med-Low Concentration
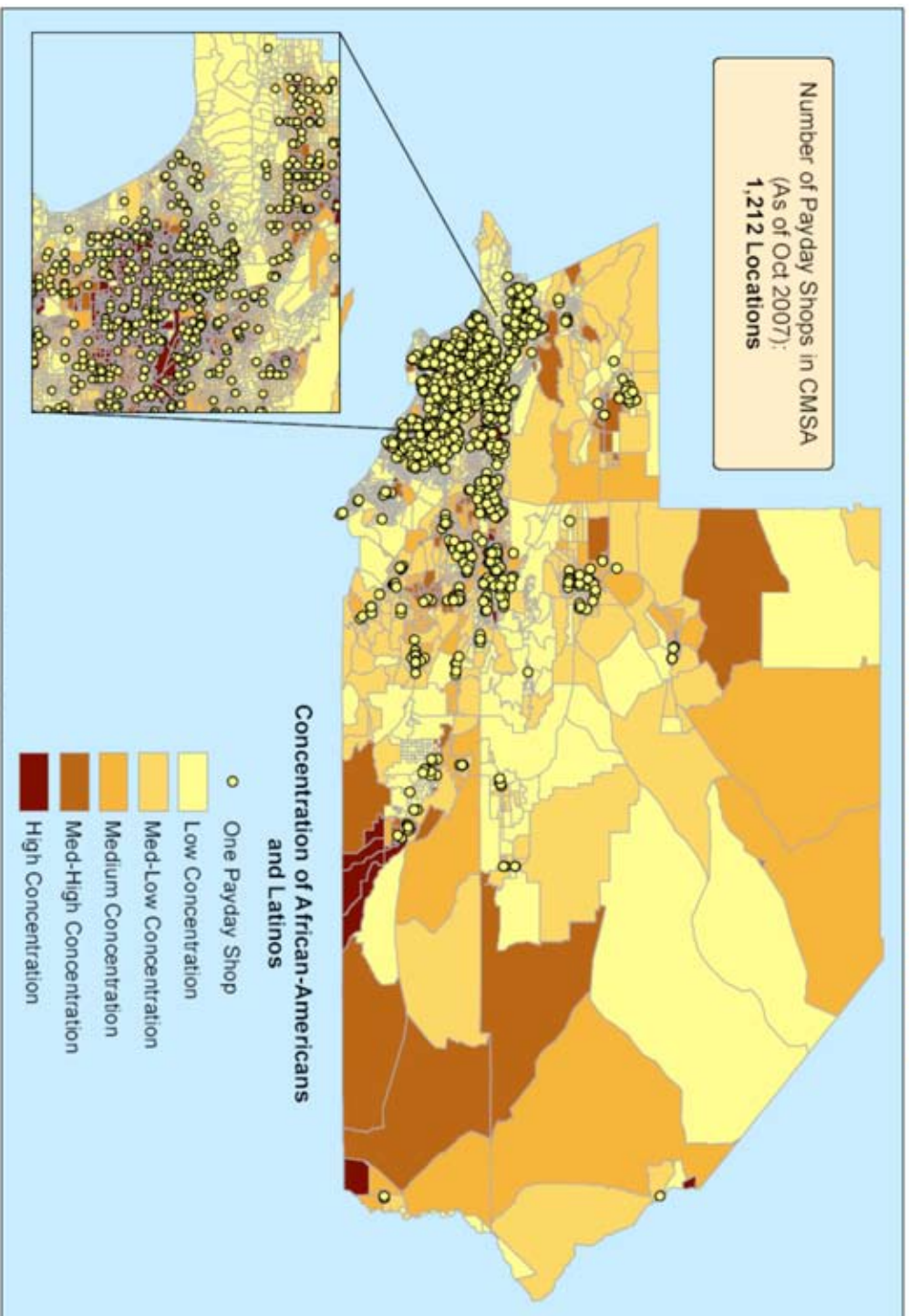Medium Concentration
Med-High Concentration
High Concentration

Center for Responsible Lending
Sources: 2000 U.S. Census, Oct 2007 CA Department of Corporations
Note: Concentrations are defined in quintiles relative to MSA
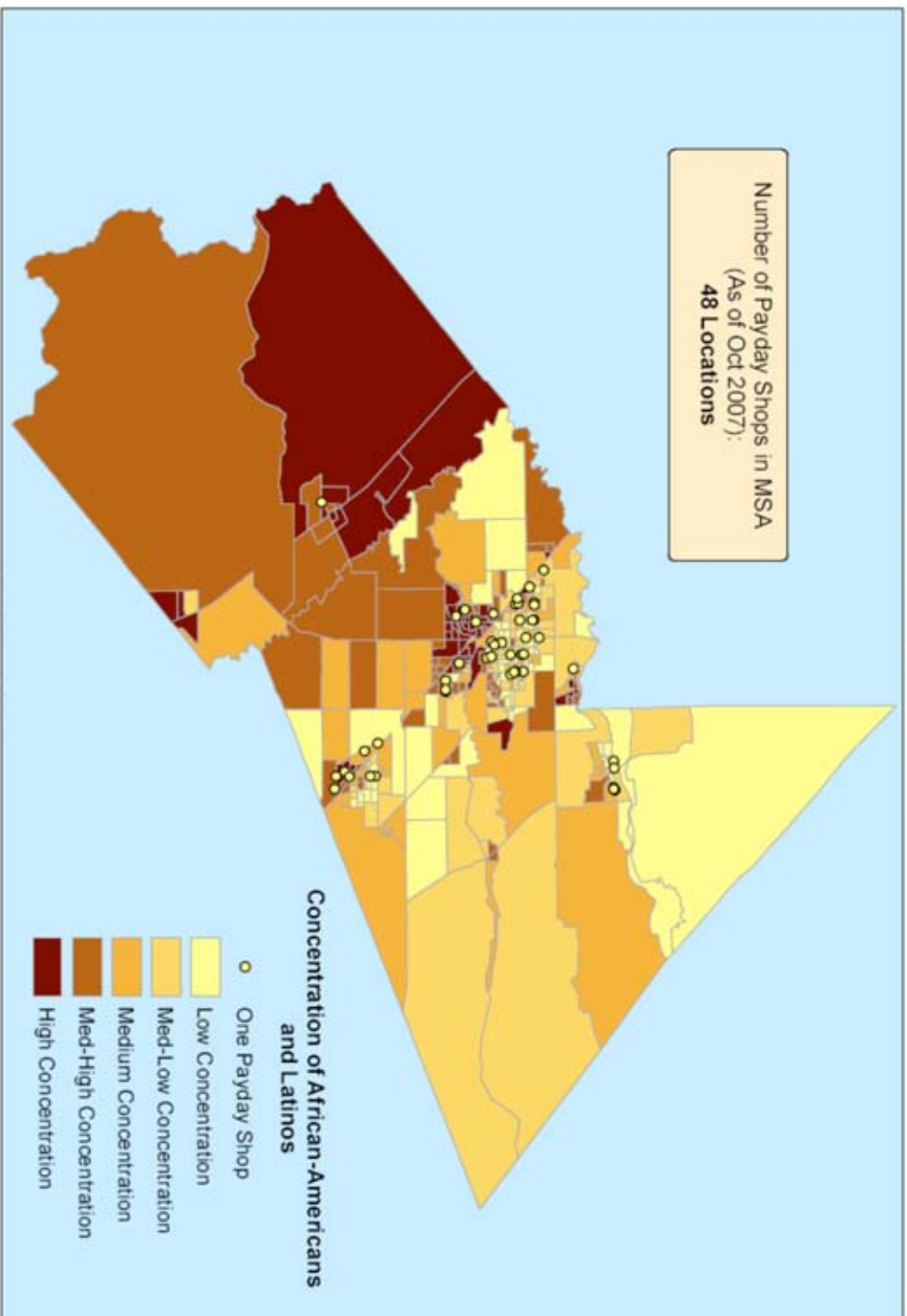
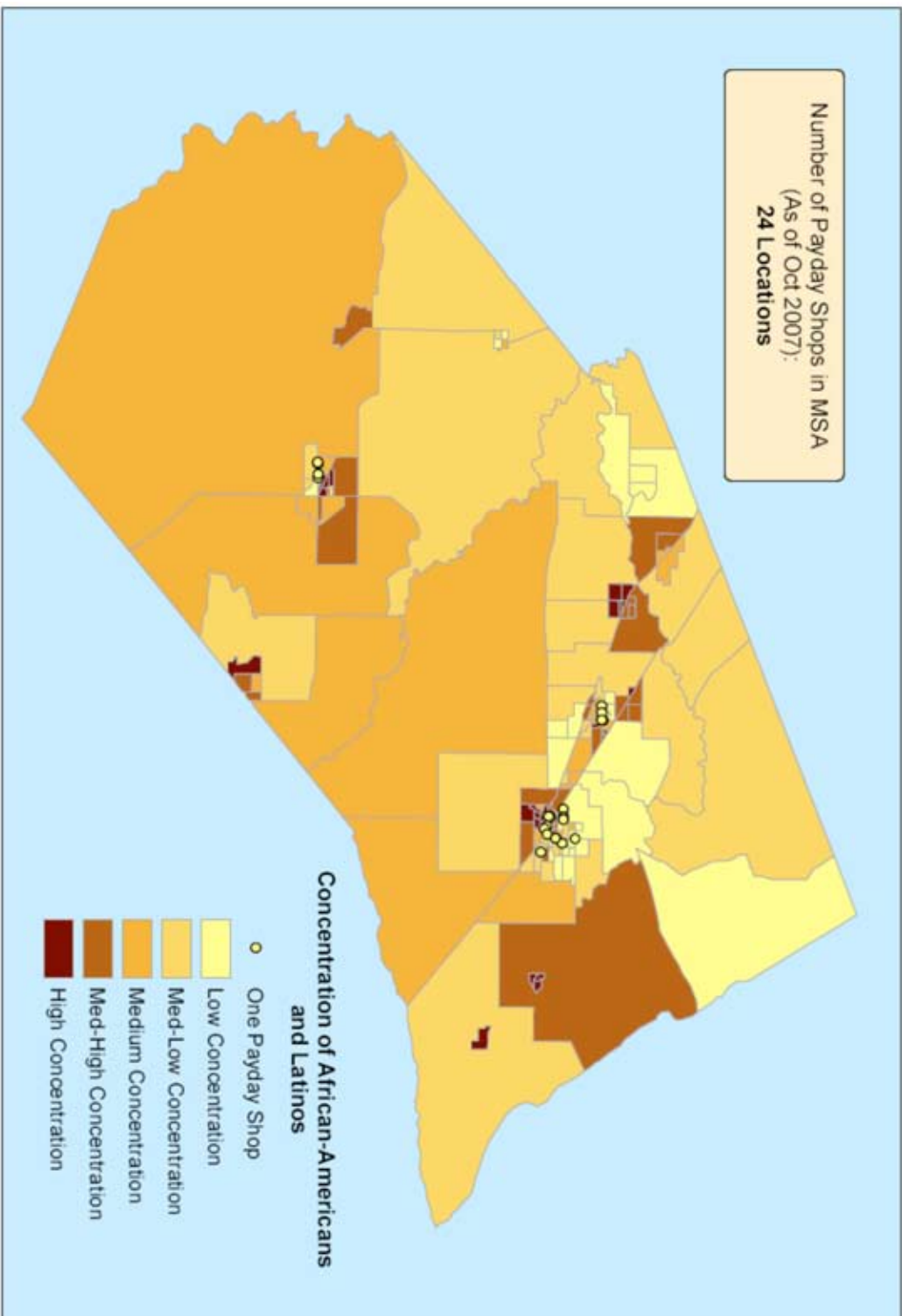Payday Shop Locations in African-American and Latino Neighborhoods Redding, CA MSA
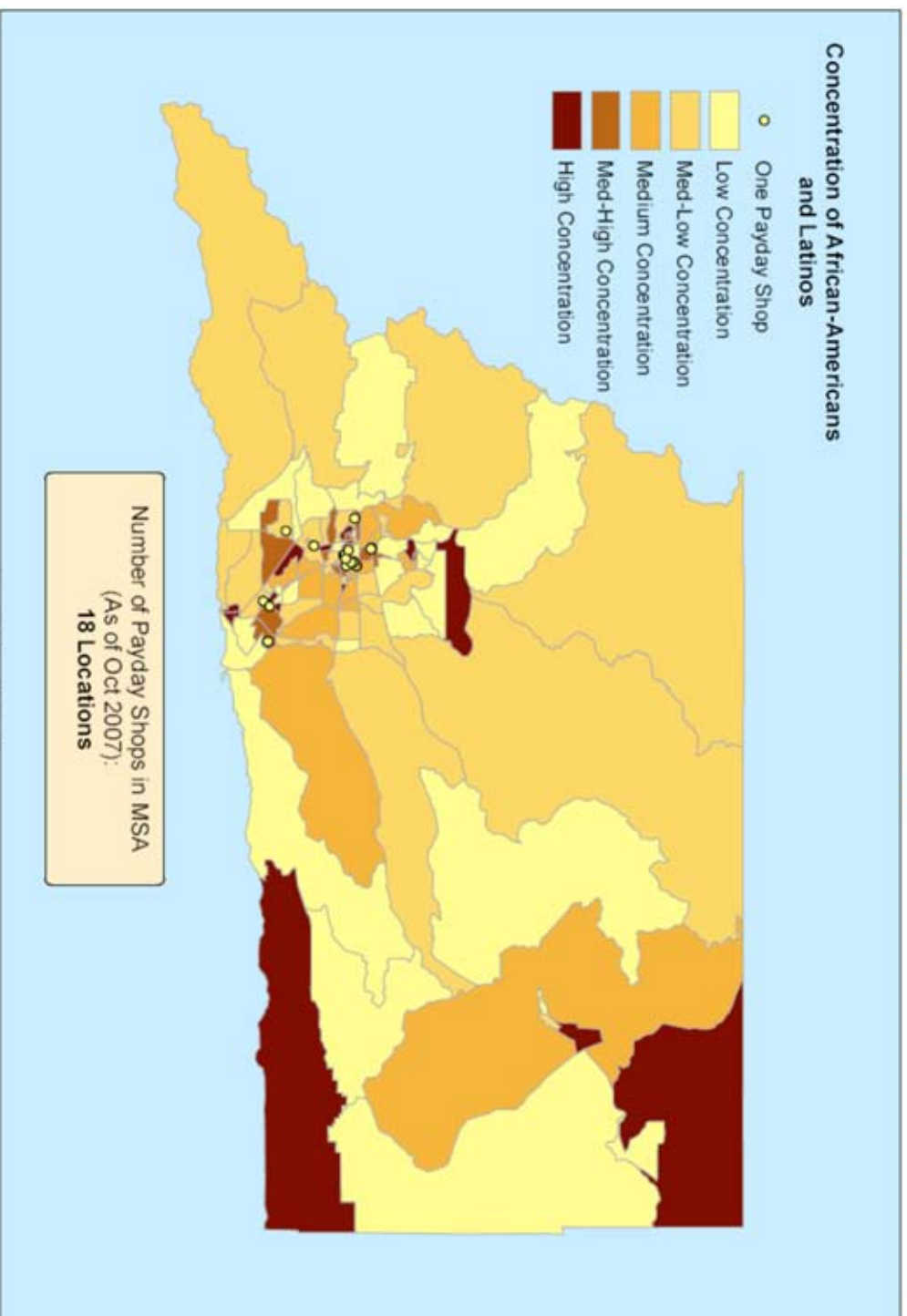
Concentration of African-Americans and Latinos

○ One Payday Shop

Low Concentration
Med-Low Concentration
Medium Concentration
Med-High Concentration
High Concentration

Number of Payday Shops in MSA (As of Oct 2007): 18 Locations

Center for Responsible Lending
Sources: 2000 U.S. Census, Oct 2007 CA Department of Corporations
Note: Concentrations are defined in quintiles relative to MSA

Payday Shop Locations in African-American and Latino Neighborhoods
Sacramento-Yolo, CA MSA
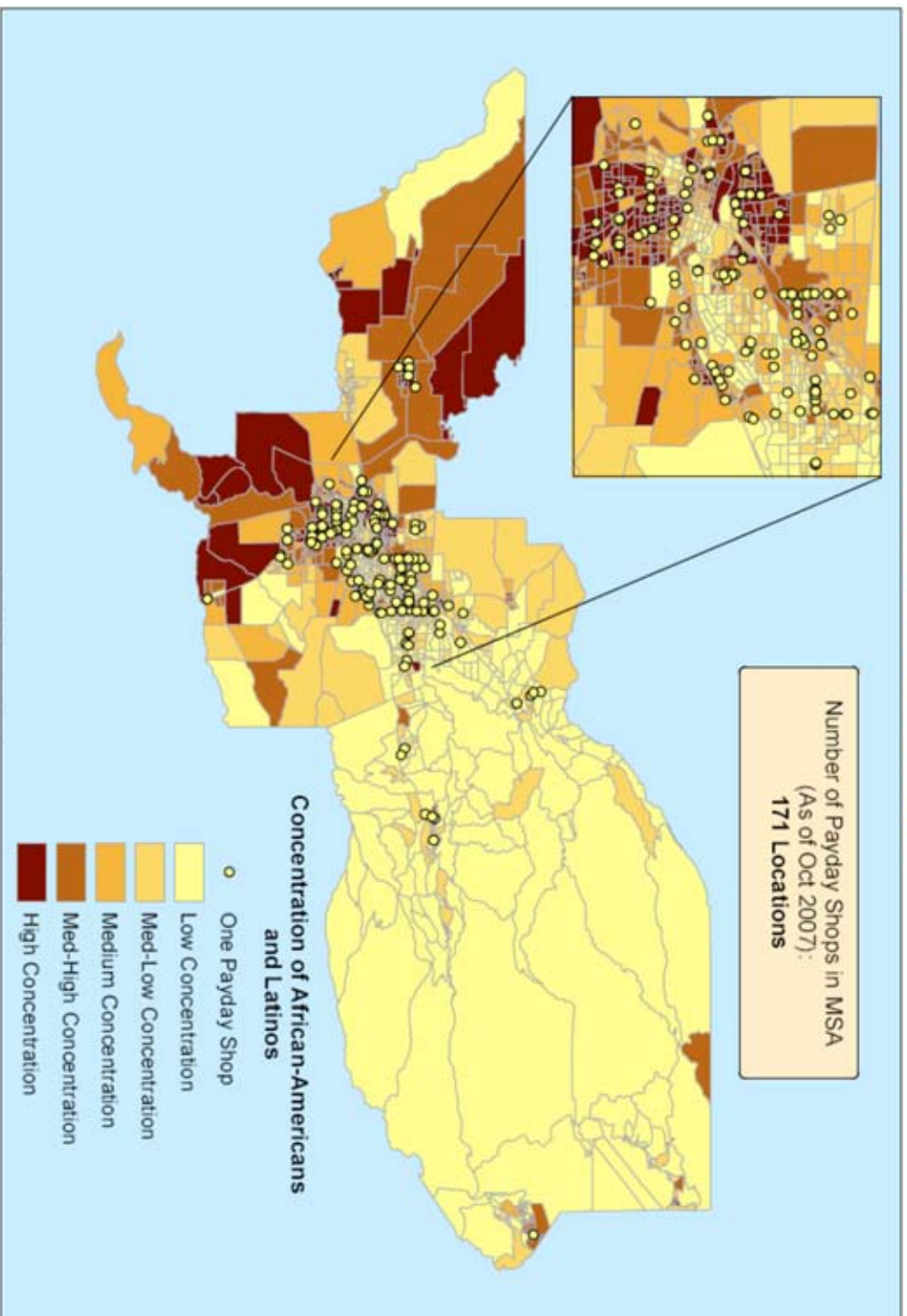
Number of Payday Shops in MSA
(As of Oct 2007):
171 Locations

Concentration of African-Americans
and Latinos

○ One Payday Shop

Low Concentration
Med-Low Concentration
Medium Concentration
Med-High Concentration
High Concentration

Center for Responsible Lending
Sources: 2000 U.S. Census, Oct 2007 CA Department of Corporations
Note: Concentrations are defined in quintiles relative to MSA

Number of Payday Shops in MSA
(As of Oct 2007):
14 Locations

Concentration of African-Americans
and Latinos

○ One Payday Shop

Low Concentration

Med-Low Concentration

Medium Concentration

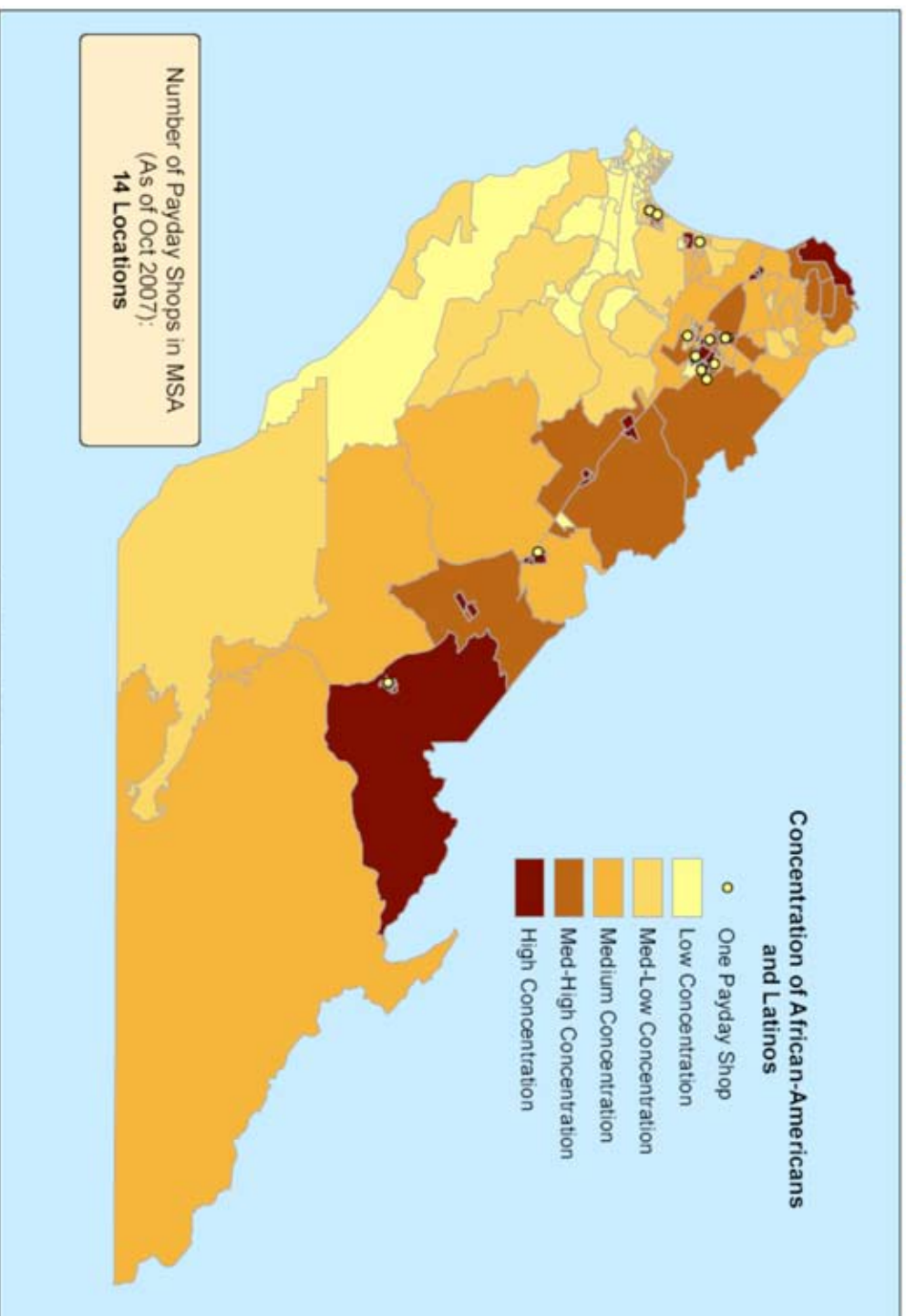Med-High Concentration

High Concentration

Center for Responsible Lending
Sources: 2000 U.S. Census, Oct 2007 CA Department of Corporations
Note: Concentrations are defined in quintiles relative to MSA

Payday Shop Locations in African-American and Latino Neighborhoods
San Diego, CA MSA

Concentration of African-Americans and Latinos

○ One Payday Shop

High Concentration
Med-High Concentration
Medium Concentration
Med-Low Concentration
Low Concentration

Number of Payday Shops in MSA
(As of Oct 2007):
205 Locations

Center for Responsible Lending
Sources: 2000 U.S. Census, Oct 2007 CA Department of Corporations
Note: Concentrations are defined in quintiles relative to MSA

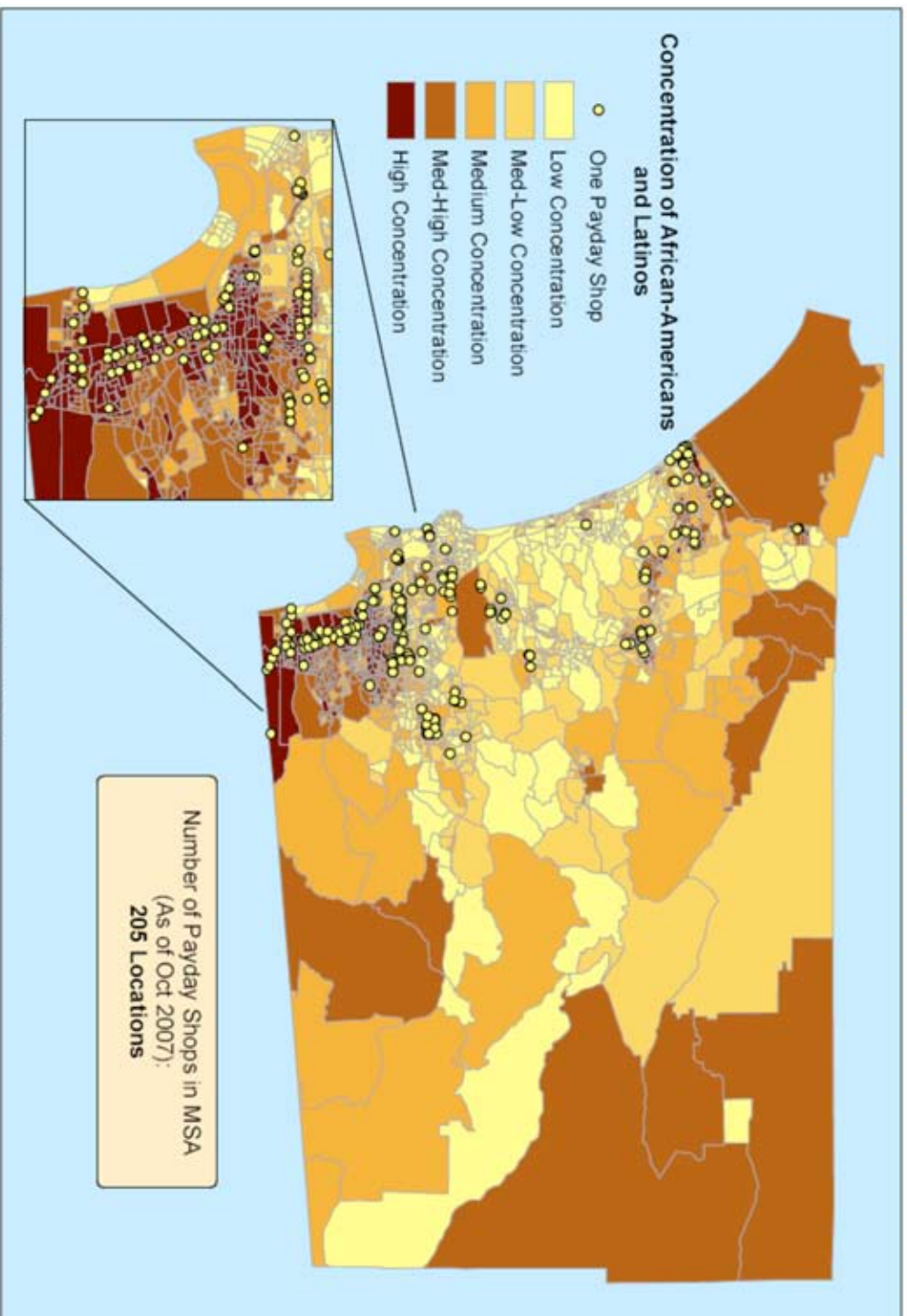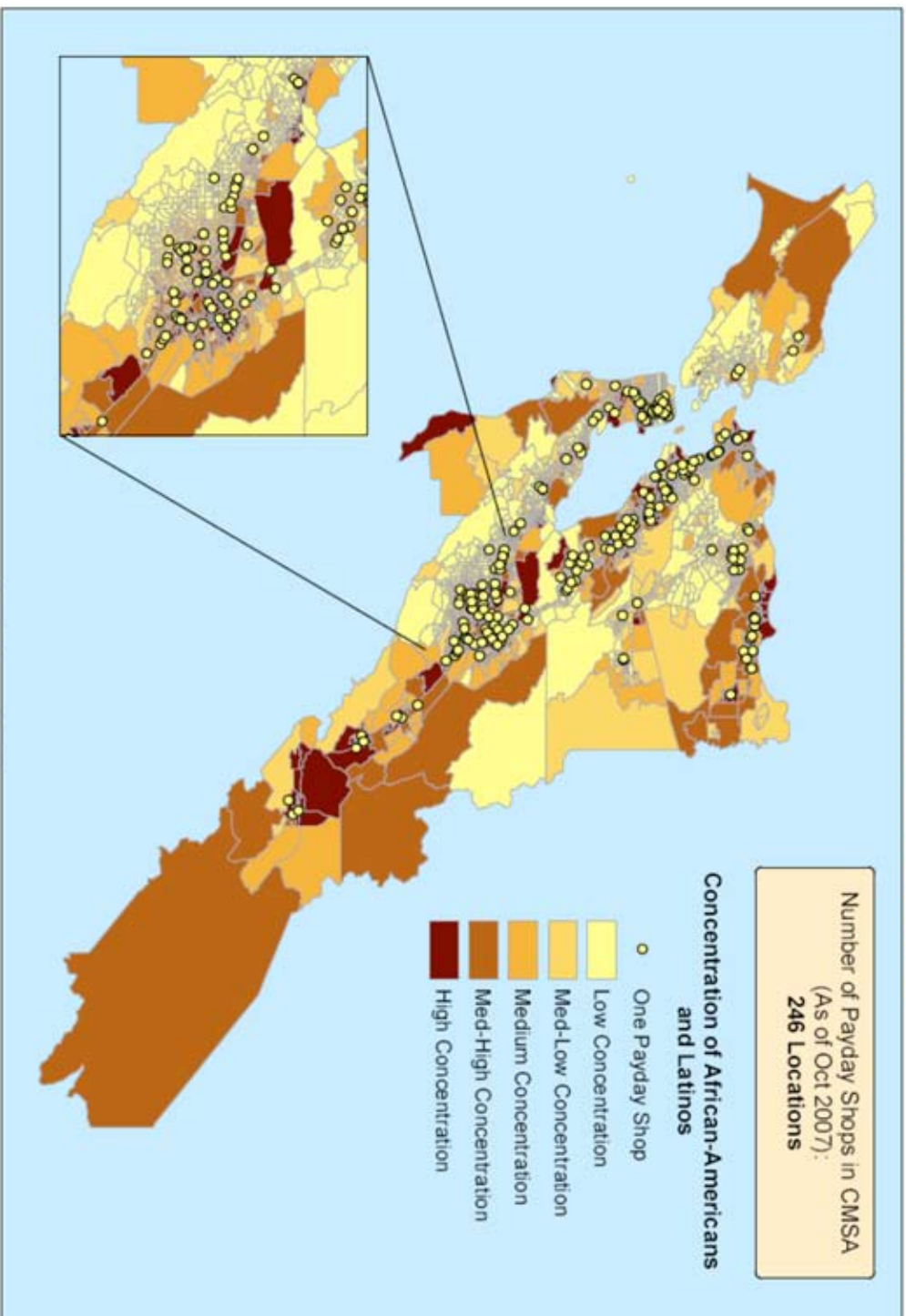# Payday Shop Locations in African-American and Latino Neighborhoods San Francisco-Oakland-San Jose, CA CMSA

Number of Payday Shops in CMSA
(As of Oct 2007):
246 Locations

○ One Payday Shop

Concentration of African-Americans and Latinos

- Low Concentration
- Med-Low Concentration
- Medium Concentration
- Med-High Concentration
- High Concentration

Payday Shop Locations in African-American and Latino Neighborhoods
San Luis Obispo-Atascadero-Paso Robles, CA MSA

Concentration of African-Americans and Latinos

○ One Payday Shop

Low Concentration
Med-Low Concentration
Medium Concentration
Med-High Concentration
High Concentration

Number of Payday Shops in MSA
(As of Oct 2007):
16 Locations

Center for Responsible Lending
Sources: 2000 U.S. Census; Oct 2007 CA Department of Corporations
Note: Concentrations are defined in quintiles relative to MSA

Payday Shop Locations in African-American and Latino Neighborhoods
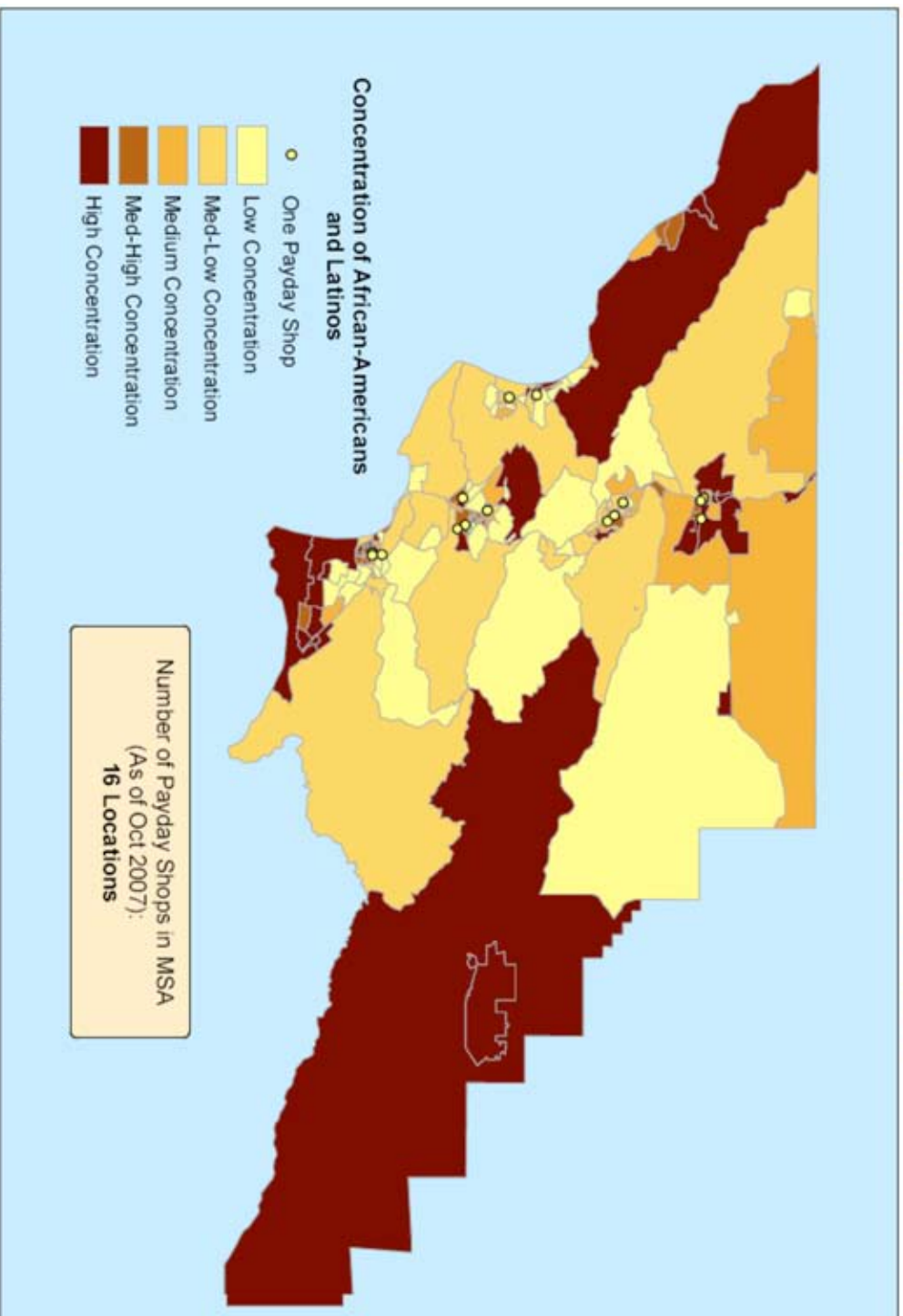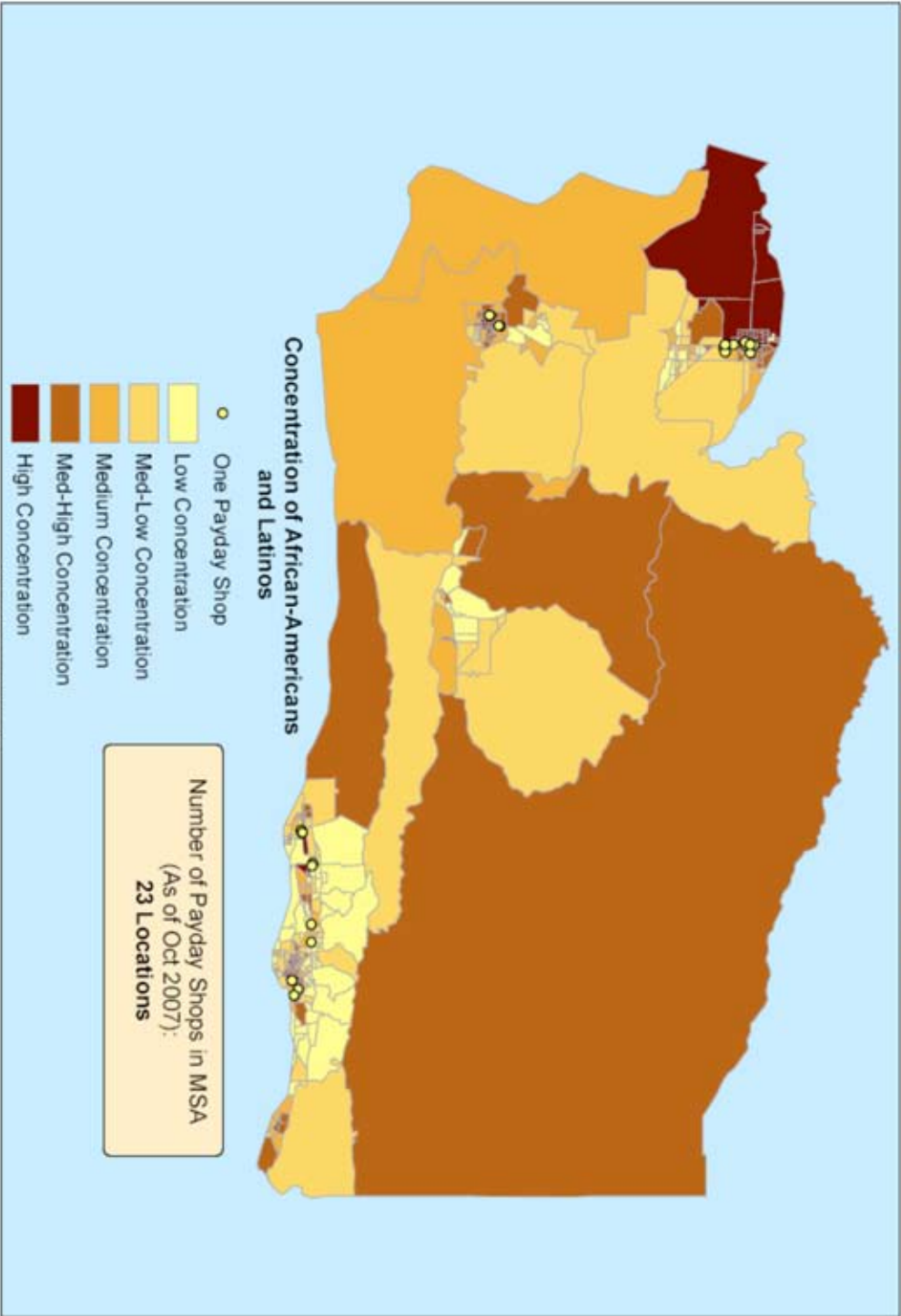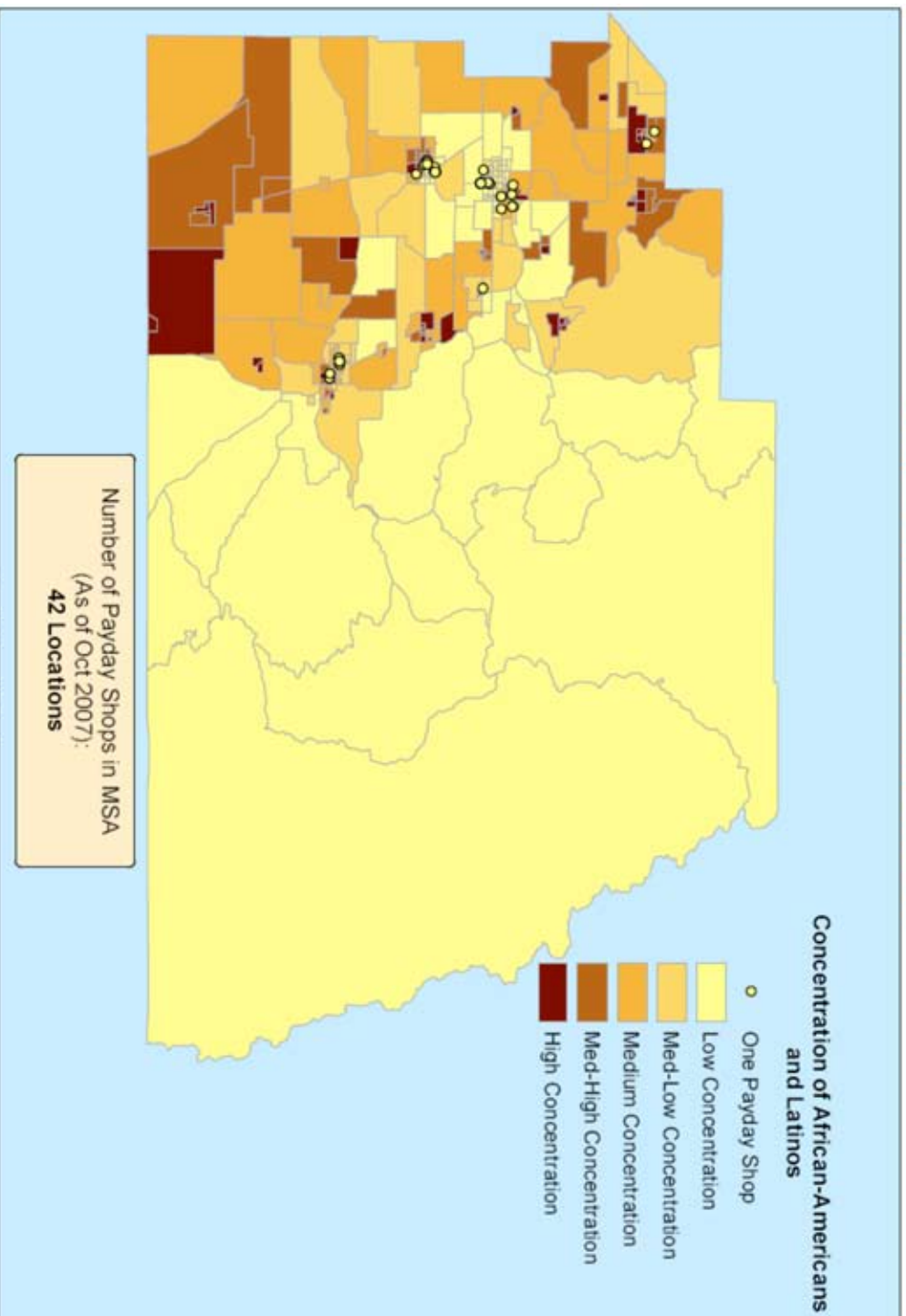Santa Barbara-Santa Maria-Lompoc, CA MSA

Payday Shop Locations in African-American and Latino Neighborhoods
Stockton-Lodi, CA MSA

Concentration of African-Americans and Latinos

o   One Payday Shop

Low Concentration
Med-Low Concentration
Medium Concentration
Med-High Concentration
High Concentration

Number of Payday Shops in MSA
(As of Oct 2007):
52 Locations

Center for Responsible Lending
Sources: 2000 U.S. Census, Oct 2007 CA Department of Corporations
Note: Concentrations are defined in quintiles relative to MSA
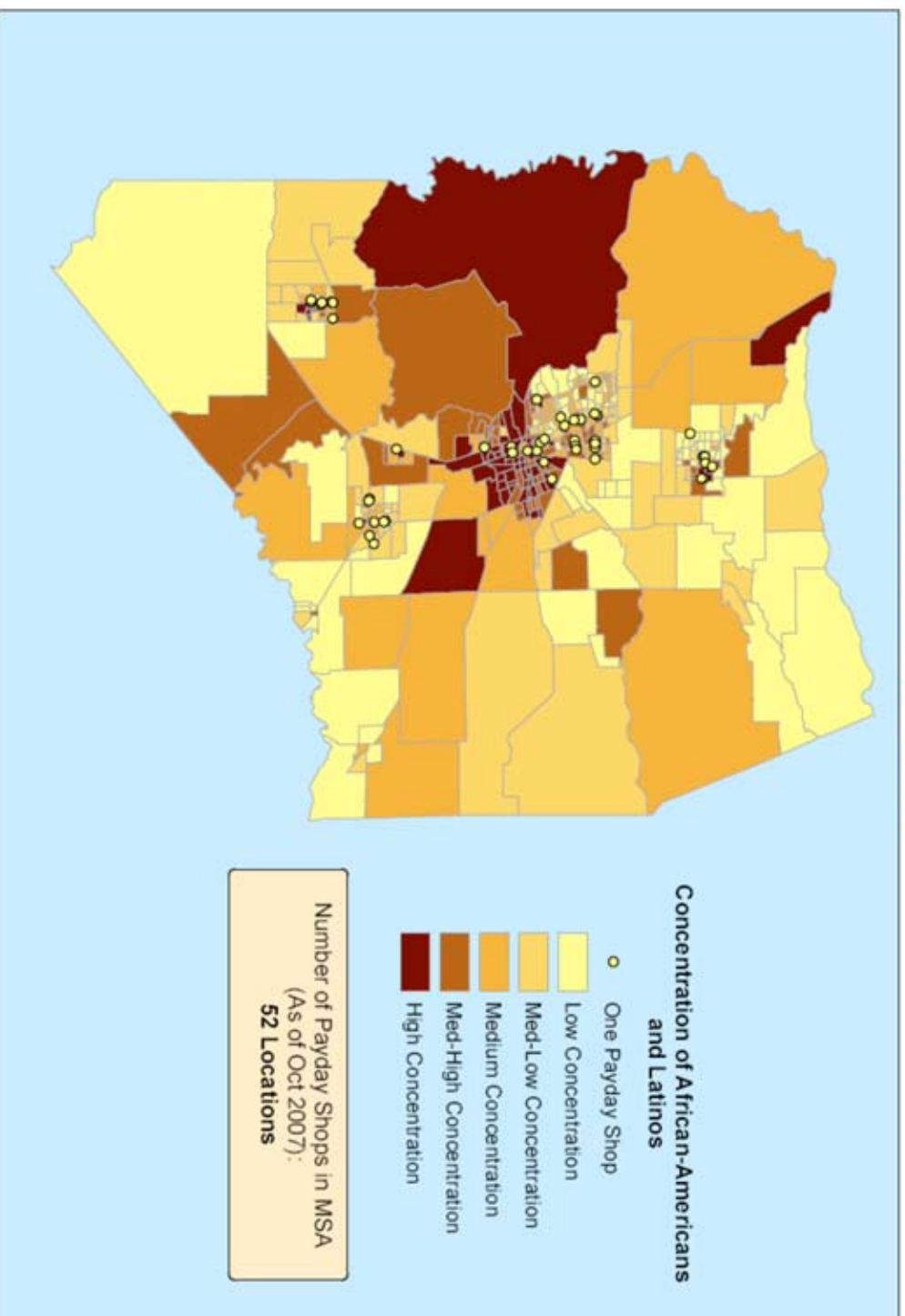
Payday Shop Locations in African-American and Latino Neighborhoods
Visalia-Tulare-Porterville, CA MSA

Concentration of African-Americans
and Latinos

○ One Payday Shop

Low Concentration
Med-Low Concentration
Medium Concentration
Med-High Concentration
High Concentration

Number of Payday Shops in MSA
(As of Oct 2007):
42 Locations

Center for Responsible Lending
Sources: 2000 U.S. Census, Oct 2007 CA Department of Corporations
Note: Concentrations are defined in quintiles relative to MSA

Payday Shop Locations in African-American and Latino Neighborhoods
Yuba City, CA MSA

Number of Payday Shops in MSA
(As of Oct 2007):
13 Locations

Concentration of African-Americans
and Latinos

○ One Payday Shop

Low Concentration
Med-Low Concentration
Medium Concentration
Med-High Concentration
High Concentration

Center for Responsible Lending
Sources: 2000 U.S. Census; Oct 2007 CA Department of Corporations
Note: Concentrations are defined in quintiles relative to MSA

NOTES

1 Regulator data from Florida and Oklahoma (the only states with this level of detailed data available) shows that 45 percent and 59 percent of repeat payday transactions, respectively, are opened at the borrower's first opportunity. In addition, 88 percent and 87 percent of subsequent loans are originated before the borrower receives their next paycheck in two weeks. This data is discussed in further detail in Uriah King and Leslie Parrish, *Springing the Debt Trap*, Center for Responsible Lending (December 13, 2007). In addition, see page 8 of *Springing the Debt Trap*, which illustrates why a borrower making $35,000 a year cannot afford to pay back a two-week payday loan and meet their other obligations.

2 Payday lending was first authorized by SB 1959, signed by the Governor in September 1996. This law was amended in 2002 by SB 898, which required payday lenders be brought under the regulatory and licensing framework of the Department of Corporations. This new law also required enhanced disclosures of fees, including APR, but did not change the maximum fee or loan amount.

3 California Deferred Deposit Transaction Law, Division 10, Sec. 23036 of the California Financial Code.

4 *2006 Annual Report, Operation of Deferred Deposit Originators under the California Deferred Deposit Transaction Law*, California Department of Corporations (September 2007). According to an analysis by the California Reinvestment Coalition, the five lenders with the most locations in California include Advance America, Check N' Go, Check into Cash, Ace America, and Money Mart (Dollar Financial Group).

5 Limited data on the race and ethnicity on payday borrowers has been collected. Using a database of a large Texas-based payday lender, Paige Skiba and Jeremy Tobacman found that African Americans (who make up 11 percent of the total adult population) made up 43 percent of payday borrowers and Latinos (who make up 29 percent of the total adult population) made up 34 percent of payday borrowers. See Table 1 of Paige Skiba and Jeremy Tobacman. *Do Payday Loans Cause Bankruptcy?* (February 19, 2008) and 2000 Census data for Texas population age 18 and older. A survey conducted by Cypress Research Group for the payday lending industry found a disproportionate share of borrowers were African American, however the survey did not find that Latinos made up a disproportionate share of payday borrowers. See *Payday Advance Customer Satisfaction Survey*, Cypress Research Group (May 2004).

6 Brian K. Bucks, Arthur B. Kennickell, and Kevin B. Moore. *Recent Changes in U.S. Family Finances: Evidence from the 2001 and 2004 Survey of Consumer Finances*. Federal Reserve Bulletin (February 2006).

7 *Payday Loans: Taking the Pay Out of Payday*. California Budget Project, (September 2008), at page 30.

8 The phrase "democratization of credit" was largely coined by Alan Greenspan as Chair of the Federal Reserve to describe the innovations in the financial services industry that expanded access to credit to previously un- or under-served households. However, Greenspan did note the danger of excess. For an example of Greenspan's views, see Consumer Credit and Financial Modernization, a speech given on October 11, 1997 at the Greenlining Institute, available at http://www.federalreserve.gov/boarddocs/speeches/1997/19971011.htm/

9 For example, Donald P. Morgan and Michael R. Strain conclude in *Payday Holiday: How Households Fare after Payday Credit Bans* that the ban on payday lending in Georgia and North Carolina has led to increased bankruptcy filings, bounced checks, and FTC complaints. Methodological problems with this study are highlighted in a CRL publication available at http://www.responsiblelending.org/pdfs/crl-morgan-critique-12-10.pdf.

10 Reviewing data from state regulators, CRL has found that the typical payday borrower takes out 8-9 loans each year. For more information, see CRL's *Springing the Debt Trap*. Pat Cirillo of Cypress Research Group, who conducts borrower surveys for the payday lending industry, testified that borrowers remain in payday loans for 18 months to the Ohio House Committee on Financial Institutions, Real Estate, and Securities on January 31, 2008. Transcript on file with CRL.

11 The payday lending industry depends on long-term usage of payday loans for the bulk of its revenues. For example, 90 percent of payday lending business is generated by borrowers taking out five or more loans a year, and over 60 percent of payday lending business is generated by borrowers taking out 12 or more loans a year. For more information, see *Springing the Debt Trap*. In addition, the paper *Payday Lending: Do the Costs Justify the Price?* for the FDIC's Center for Financial Research by Mark Flannery and Katherine Samolyk concludes that "high-frequency borrowers account for a disproportionate share of a payday loan store's loans and profits."

12 Several researchers have noted negative effects of payday borrowing. For example, using a database of a large Texas-based payday lender, Paige Skiba of Vanderbilt University and Jeremy Tobacman of Oxford University find that payday borrowers are twice as likely to file for bankruptcy than similarly situated people who were not approved payday loans. In a subsequent paper, these authors also found that half of payday borrowers ultimately end their cycle of payday lending in default. See Paige Skiba and Jeremy Tobacman. *Do Payday Loans Cause Bankruptcy?* (February 19, 2008) and *Payday Loans, Uncertainty and Discounting: Explaining Patterns of Borrowing, Repayment, and Default* (January 21, 2008). In addition, the FDIC ruled that its member banks could no longer partner with payday lenders out of concerns that "when used frequently or for long periods, the costs [of a payday loan] can rapidly exceed the amount borrowed and cause a serious financial hardship for the borrower." See *Press Release: FDIC Revises Payday Lending Guidance* (March 2, 2005).

13 For example, in focus groups of California payday borrowers conducted for the California Department of Corporations, most participants noted that—although they used their first payday loan for a specific unexpected expense--they now used subsequent payday loans to "purchase essentials and maintain their household between pay periods." In addition, half of California payday borrowers responding to a telephone survey noted that they usually took payday loans to pay other bills, and 22 percent used payday loan proceeds to cover household needs such as groceries. Only 10 percent noted that they only use payday loans for emergencies. See *2007 Department of Corporations Payday Loan Study*, Applied Management & Planning Group (December 2007) at page 75 and Table 28 at page 47. Similarly, focus groups of North Carolina pay-

day borrowers revealed that frequent borrowers used payday loans to pay for expected expenses and/or viewed the loans as supplemental income; though most focus group participants noted that they initially took out their first payday loan because of a specific financial setback. See *North Carolina After Payday Lending: Attitudes and Experiences with Credit Options,* University of North Carolina Center for Community Capital (November 2007).

14 Delvin Davis, Keith Ernst, Uriah King, and Wei Li. *Race Matters: The Concentration of Payday Lenders in African-America Communities in North Carolina.* Center for Responsible Lending (March 2005).

15 Ibid.

16 Mark L. Burkey and Scott P. Simkins, "Factors Affecting the Location of Payday Lending and Traditional Banking Services in North Carolina" *Review of Regional Studies,* Fall 2004 Vol. 34 no. 2 pp. 191-205.

17 Assaf Oron. *Easy Prey: Evidence for Race and Military Related Targeting in the Distribution of Payday Loan Branches in Washington State.* Department of Statistics, University of Washington (March 2006).

18 Generally, the term "underbanked" is used to describe a person who has a checking account but, rather than or in addition to using other mainstream financial products, they regularly use alternative products and services such as check cashing and payday loans. For an overview of the preferences and challenges of underbanked consumers see work the Center for Financial Services Innovation (www.cfsinnovation.com) such as *The CFSI Underbanked Consumer Study: Underbanked Consumer Overview and Market Segments Fact Sheet* (June 8, 2008).

19 A survey of California payday borrowers found that the leading way a borrower chose their payday lender was that they "saw a pay-day location and went in," as noted by 24.4 percent of respondents. See.Table 25 on page 44 of *2007 Department of Corporations Payday Loan Study,* Applied Management & Planning Group (December 2007).

20 Matt Fellowes and Mia Mabanta. *Banking on Wealth: America's New Retail Banking Infrastructure and Its Wealth-Building Potential.* Brookings Institution (January 2008).

21 For demographic data on payday borrowers, see P*ayday Advance Customer Satisfaction Survey,* Cypress Research Group (May 2004); *Payday Advance Customer Research: Cumulative State Research Report,* IO Data Corporation (2002); and Advance America 10-K SEC filing for the year ending December 31, 2007.

22 While race and ethnicity are not important explanatory factors for bank branch location, the variable "% non-English speakers" explains 7.3 percent of the proximity of banks and 15.6 percent of the clustering of banks among neighborhoods. There are several potential reasons for this discrepancy. First, non-English speakers are likely among the most recent immigrants to California from other countries, making up only a segment of our African American and Latino population overall. Second, "non-English speakers" captures a variety of races and ethnicities in addition to African Americans and Latinos, which are the focus of this study.

23 *The CFSI Underbanked Consumer Study: Underbanked Consumer Overview & Market Segments Fact Sheet.* Center for Financial Services Innovation (June 8, 2008).

24 *Payday Advance Customer Satisfaction Survey,* Cypress Research Group (May 2004).

25 A survey of California payday borrowers found that the leading way a borrower chose their payday lender was that they "saw a pay-day location and went in," as noted by 24.4 percent of respondents. See.Table 25 on page 44 of *2007 Department of Corporations Payday Loan Study,* Applied Management & Planning Group (December 2007).

26 In Marsha Courchane and Peter Zorn. *Consumer Literacy and Credit Worthiness.* (n.d.), the authors find that African Americans correctly identify that they have good credit 65 percent of the time, compared with 76 percent of the time for whites and 74 percent of the time for Latinos.

27 In a recent survey, 41 percent of California payday lenders noted that "they offered some type of bonus to consumers who referred other customers to their locations." See page 21 of *2007 Department of Corporations Payday Loan Study,* Applied Management & Planning Group (December 2007).

28 A survey of California payday borrowers found that the second most important reason a borrower chose their payday lender (after convenience) was through a "word of mouth" referral by a friend of relative. See.Table 25 on page 44 of *2007 Department of Corporations Payday Loan Study,* Applied Management & Planning Group (December 2007).

29 Edna R. Sawady and Jennifer Tescher. *Financial Decision Making Processes of Low-Income Individuals,* Harvard University Joint Center for Housing Studies (February 2008) and *The CFSI Underbanked Consumer Study: Underbanked Consumer Overview & Market Segments Fact Sheet.* Center for Financial Services Innovation (June 8, 2008).

30 As noted by researchers summarizing various survey of payday borrowers nationally in *North Carolina After Payday Lending: Attitudes and Experiences with Credit Options.* University of North Carolina Center for Community Capital (November 2007), "generally [payday loan borrowers] knew the dollar fee per $100 borrowed but were much less clear on the APR. In one study, 96 percent of respondents could report the finance charge per $100 borrowed, but only 16 percent could report an APR, and 60 percent of those were probably wrong, including 41 percent who reported an APR below 30 percent." Similarly, in the California payday borrower survey, respondents accurately stated the fee per dollar borrowed for a payday loan, but the few who could offer a guess at an interest rate generally reported one well below 100 percent and

typically within the range of a credit card APR. For more information, see discussion on pages 54-56 of 2007 *Department of Corporations Payday Loan Study,* Applied Management & Planning Group (December 2007).

31 CRL has a variety payday lending advertisements on file collected through Mintel Comperemedia which offer free or discounted loans to first-time customers. For example, Check into Cash has a mailer offering a first loan for free, 1-2-3 Cash offers the first $100 of a loan for free, and 1-866-9-Get-Cash promotes a 50% discount.

32 Based on data from the Department of Corporations, the California Budget Project estimates that approximately 1 million Californians took out payday loans in 2006, averaging roughly ten loans per borrower. See slide 5 in *Payday Loans: Taking the Pay Out of Payday.* California Budget Project, (September 2008). Only four percent of loans (or revenues) are generated by borrowers taking out just one loan a year (Slide 19). The California Budget Project also notes that payday lenders reported that 84 percent of business is attributable to "repeat customers" according to the 2007 Department of Corporations Payday Loan Study conducted by Applied Management & Planning Group. See page 2 of *Recent Reports on Payday Lending Should be Used with Caution,* California Budget Project (May 1, 2008).

33 *North Carolina Consumers After Payday Lending: Attitudes and Experiences with Credit Options.* University of North Carolina Center for Community Capital (November 2007).

34 For more details, see *Report on the Implementation of Limitations on Terms of Consumer Credit Extended to Service Members and their Dependents.* Department of Defense (July 22, 2008).

35 A survey of California payday borrowers found that 50 percent took out a payday loan to pay other bills, 22 percent used the funds to cover household needs such as groceries, and only 10 percent take payday loans only for emergency situations. See Table 28 at page 47 of *2007 Department of Corporations Payday Loan Study,* Applied Management & Planning Group (December 2007).

36 Non-credit strategies reported to be used by households facing financial shortfalls in North Carolina include working with a creditor to renegotiate a debt or pay a few days late, borrowing from friends, family, or an employer, or receiving assistance from a charitable source. See *North Carolina Consumers After Payday Lending: Attitudes and Experiences with Credit Options.* University of North Carolina Center for Community Capital (November 2007).

37 Testimony of Jean Ann Fox, Director of Consumer Protection, Consumer Federation of America before the Subcommittee on Domestic Policy of the House Committee on Oversight and Domestic Reform (March 21, 2007).

38 Golden 1 Credit Union offers a $300 Lifeline Advance at 15 percent APR with the only requirement being an account and direct deposit. Californians living or working in 28 counties across the state are eligible for membership. In addition, BBVA Bancomer USA, a bank with 30 locations primarily serving California's Latino households, is part of the FDIC's small loan pilot program. Banks participating in this program offer small loans costing no more than 36 percent APR with a built-in savings component to borrowers who might otherwise consider a payday loan.

39 R.W. Sinnott "Virtues of the Haversine", *Sky and Telescope,* vol. 68, no. 2, 1984, p.159

40 Kleinschmidt I., Sharp B.L., Clarke G.P., Curtis B., Fraser C. (2001). "Use of generalized linear mixed models in the spatial analysis of small-area malaria incidence rates in Kwazulu Natal, South Africa." *American Journal of Epidemiology.* 2001 Jun 15;153(12):1213-21.

About the Center for Responsible Lending

The Center for Responsible Lending is a nonprofit, nonpartisan research and policy organization dedicated to protecting homeownership and family wealth by working to eliminate abusive financial practices. CRL is affiliated with Self-Help, one of the nation's largest community development financial institutions.

Visit our website at **www.responsiblelending.org.**

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