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**Determinants of the Locations of Payday Lenders, Pawnshops and
Check-Cashing Outlets**

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Abstract

A large and growing number of low-to-moderate income U.S. households rely upon alternative financial service providers (AFSPs) for a variety of credit products and transaction services, including payday loans, pawn loans, automobile title loans, tax refund anticipation loans and check-cashing services. The rapid growth of this segment of the financial services industry over the past decade has been quite controversial. One aspect of the controversy involves the location decisions of AFSPs. This study examines the determinants of the locations of three types of AFSPs – payday lenders, pawnshops, and check-cashing outlets. Using county-level data for the entire country, I find that the number of AFSP outlets per capita is significantly related to demographic characteristics of the county population (e.g., racial/ethnic composition, age, and education level), measures of the population’s credit worthiness, and the stringency of state laws and regulations governing AFSPs.

I. Introduction

A large and growing number of low-to-moderate income U.S. households rely upon alternative financial service providers (AFSPs) for a variety of credit products and transaction services, including payday loans, pawn loans, automobile title loans, tax refund anticipation loans and check-cashing services. The rapid growth of this segment of the financial services industry over the past decade has been quite controversial.¹ Supporters argue that AFSPs have flourished because they meet consumers' growing demand for quick, convenient access to cash and short-term credit. At the same time, critics assert that these firms charge unconscionably high prices that are not justified by costs, thereby taking advantage of some of the most economically vulnerable members of society.

The location decisions of AFSPs have also been the subject of considerable debate. Supporters of AFSPs argue that the firms locate in areas that are inadequately served by banks and other mainstream financial service providers, thereby fulfilling otherwise unmet needs of the residents of these neighborhoods. Critics of AFSPs, on the other hand, argue that these firms prey upon disadvantaged segments of the population by strategically locating their stores in low-income, high-minority-population neighborhoods.

A number of researchers have studied the geographic distribution of alternative financial service providers. Most of these studies have focused on a limited geographic area (e.g., a single state or a small number of urban areas) or have used highly aggregated (e.g., state-level) data to examine a larger geographic area, such as the entire country or a large portion thereof. They typically have considered demographic factors such as

¹ Apgar and Herbert (2004), page I-1.

income, race, and education level as determinants of the locations of AFSPs. Some studies have also included state usury ceilings or the proximity of bank branches as explanatory variables. Although the findings of these studies are somewhat mixed, they generally find that AFSPs are more prevalent in areas where a large percentage of the population has low-income, lacks a high school diploma or is black or Hispanic. Those studies that include usury ceilings find higher ceilings associated with a larger number of AFSPs per capita, and those that include the locations of bank branches find a positive relationship between the number of bank branches per capita and the number of AFSP outlets per capita.

This study expands upon the existing research by examining the determinants of AFSP location using county-level data for the entire country, estimating separate models for urban and rural areas for each of three types of AFSP, and introducing some new explanatory variables. Using county-level observations for the entire country allows for an analysis that is at once more granular than that undertaken in previous nationwide studies and more comprehensive than studies that focus on smaller geographic areas. The new explanatory variables reflect two important factors – state laws and regulations directly affecting AFSPs and the creditworthiness of the county population – that have not been considered in previous studies.

The remainder of the paper is organized as follows: Section II provides a brief description of each of the three segments of the alternative financial services industry examined in the paper: pawn lending, check cashing, and payday lending. Section III describes the regulatory requirements and constraints faced by each industry segment. Section IV provides an overview of the existing literature on AFSP location. Sections V

and VI present evidence on the geographic distributions of various types of financial service providers and an analysis of the determinants of AFSP locations, respectively.

Section VII concludes the paper.

II. Industry Background

A. Pawn Lending

Pawnshops make small, non-recourse loans collateralized by tangible personal property, such as jewelry, consumer electronics, tools, musical instruments or firearms. Pawnbrokers do not attempt to assess the creditworthiness of their customers; rather, they rely upon the estimated value of the collateral in making their loan decisions. The amount loaned is determined as a percentage of the estimated resale value of the pledged collateral and, according to one large pawnshop operator, is typically between 25 and 65 percent.² Pawnshop operators rely on a number of different sources for determining the resale value of the pledged collateral, including catalogues, “blue books,” newspapers, internet sites, and at least for some of the larger companies, their own proprietary computerized valuation systems. The average size of a pawn loan is quite small – on the order of \$75 to \$100 – and its term is typically one month.

Fees charged for pawn loans are typically stated as a percentage of the loan amount, and can vary from as low as 12 percent to as high as 300 percent annually, depending, to a large degree, on legal limits imposed by the state in which the loan is made. At the time of the pawn transaction, the borrower receives a document, commonly referred to as a pawn ticket, which includes the customer’s name and identifying information (e.g., driver’s license number), the name and address of the pawnshop, a

² Source: EZCORP, Inc. Form 10-K for the fiscal year ended September 30, 2007.

description of the pledged collateral, the amount of the loan, the maturity date of the loan, the amount that must be paid to redeem the collateral at maturity, and the annual percentage rate (APR). If the loan is not repaid at or prior to maturity, the customer is given a grace period (typically 30 to 60 days) within which to redeem the pledged property by paying the loan amount and all accrued charges. If, at the end of the grace period, the customer has neither redeemed his property nor extended the loan, the collateral is forfeited to the pawnshop. The pawnshop then sells the property to recover the principal amount of the loan plus a profit margin.

The pawn lending business has a very long history, with informal pawnbroking dating back to ancient times.³ Pawnbroking in America can be traced back to Colonial times. By the early nineteenth century, pawnbrokers were active in New York City, Philadelphia, and Boston; by the end of the century they were found in most urban areas throughout the country. Pawnbroking went through a period of decline from about 1930 through the mid-1970s, followed by a period of rapid growth that lasted through the mid-1990s.

Over the past decade, the number of pawnshops operating in the U.S. has experienced a modest decline, which may be attributable to the rapid growth of payday lending during this period. As of 2007, the number of pawnshops in the U.S. was estimated to be between 10,000 and 15,000. Most of these shops were owned by small, independent operators, each of whom owned between one and three locations. At the end of 2007, Cash America International, Inc., the largest provider of pawn loans in the U.S., operated 499 pawnshops in 22 states, and the three largest publicly traded firms in the pawn lending business (Cash America, EZPAWN, and First Cash Financial Services)

³ The information in this paragraph is derived from Caskey (1994 and 2003).

together operated a total of approximately 900 stores.⁴ All three of these companies diversified into the payday lending business between 1998 and 2000.

B. Check Cashing

Check-cashing outlets cash checks in exchange for a fee that is typically a percentage of the face value of the check.^{5,6} Most of the checks that they cash are paychecks or government-issued checks. Fees charged for cashing these types of checks are generally between 1.5 and 3.5 percent of the face value of the check. Some check cashers also cash personal checks; however, the fees charged for this service are usually much higher to compensate for the greater risk that the check will bounce.

Check-cashing outlets first came into existence in the 1930s in Chicago and New York City. The industry did not expand beyond the five or six largest urban areas of the U.S. until the early 1970s. The number of check-cashing outlets grew rapidly from the early 1980s through the mid-1990s, and more slowly in recent years. The slowdown in growth over the past decade is at least partially attributable to a decline in demand for check-cashing services, as the share of wage payments and government transfer payments made by direct deposit has increased. As of 2005 there were approximately 13,000 check-cashing outlets in the U.S., most of which were owned by small, independent

⁴ Source: Cash America International, Inc. Form 10-K for the fiscal year ended December 31, 2007.

⁵ Much of the information in this paragraph and the next is derived from Caskey (1994 and 2003).

⁶ Note that throughout this essay the term “check-cashing outlet” is used to refer to establishments whose primary business is providing alternative financial services that include cashing checks for a fee. Other entities, among them banks, grocery stores, and liquor stores, often cash checks for a fee. Those entities are not included in any check cashing data referenced in this paper.

operators. The nine largest check-cashing companies accounted for about one third of these outlets.⁷

C. Payday lending

A payday loan is a small, short-term, unsecured, single-payment, consumer loan. The borrower writes a personal check to the lender, with the amount of the check equal to the loan amount plus the finance charge. The lender agrees to hold the check for a specified period of time (usually until the customer's next payday) before depositing it. The term of the loan is typically between seven and thirty days. The borrower can repay the loan at or prior to its maturity by (i) paying the lender in cash the face value of the check and retrieving the check from the lender, or (ii) allowing the lender to deposit the check. If the borrower does not wish to repay the loan at maturity, the loan can often be renewed or "rolled over" by paying the finance charge and having the lender agree to hold the check for another specified period of time. Payday loans vary in size from \$50 to \$1000, with the average loan size being between \$300 and \$400. Finance charges, which are subject to legal limits in many states, typically range from about \$10 to \$20 per \$100 borrowed. For a two-week loan, these fees translate into APRs ranging from 260 to 520 percent.

Payday loan customers are required to have a bank account and a job (or other regular source of income). The largest payday lender in the U.S., Advance America, reports that it does not undertake any evaluation of a customer's creditworthiness in

⁷ Source: ACE Cash Express, Inc. Form 10-K for the fiscal year ended June 30, 2006. This is the most recent data that I could find on the number of check-cashing outlets. ACE Cash Express is no longer a publicly traded company and has not filed a Form 10-K since 2006.

deciding whether to approve a loan application.⁸ The company does, however, take into consideration the customer's income in determining the size of the loan. Although payday lenders generally do not obtain credit reports on their loan applicants, some lenders subscribe to a service that provides information about a potential customer's prior payday borrowing and repayment behavior.⁹

From its emergence in the early 1990s through about 2006, the payday lending industry enjoyed explosive growth.¹⁰ In 1996, there were an estimated 2,000 payday lending stores operating in the U.S.¹¹ By 2007, the number of payday lending locations had grown to approximately 24,000.¹² The majority of these stores were owned by small, independent operators. The largest provider of payday loans (as measured by number of stores) operated 2,813 stores in 35 states, and the ten largest firms together accounted for less than 40% of all payday lending locations. In recent years, some payday lenders have begun to provide loans over the internet, as well as through their stores. Stephens Inc. estimates that in 2006 internet lending accounted for nearly 12 percent of the industry's \$47.65 billion volume of payday loans.¹³

III. Regulatory Environment

Providers of alternative financial services are subject to numerous legal and regulatory restrictions, at both the state and federal levels. At the federal level, all financial service providers must comply with the Gramm-Leach-Bliley Act, the USA

⁸ Source: Advance America, Cash Advance Centers, Inc. Form 10-K for Fiscal Year ending December 31, 2007.

⁹ See Elliehausen (2006).

¹⁰ Industry growth largely ceased in 2007, following legislative and regulatory reforms in a number of states that adversely affected the profitability of the payday lending business.

¹¹ Source: QC Holdings, Inc. Form 10-K for fiscal year ended December 31 2006.

¹² Source: Stephens, Inc. (2007).

¹³ Stephens, Inc. (2007).

PATRIOT Act, and the Bank Secrecy Act. In addition, all loan providers must comply with the Truth in Lending Act, the Equal Credit Opportunity Act, the Fair Credit Reporting Act, the Fair Debt Collection Practices Act, and the Talent-Nelson Amendment to the 2007 Defense Authorization Bill.¹⁴ At the state level, restrictions typically vary across different types of AFSPs.

Pawnshops generally must be licensed by the state in which they do business. State laws and regulations specify licensing requirements (e.g., licensees may be required to be bonded and insured) and often impose restrictions on various aspects of the loans provided by pawnshop operators. Common state restrictions include upper or lower bounds on the term of a pawn loan, ceilings on the interest rates and other fees charged for a pawn loan, and requirements that the pawnshop must hold a pawned item for some specified minimum time period after a borrower defaults on a loan. Some states also specify the information that must be provided on the pawn ticket.

Pawnshops are also subject to local regulation in some cities or towns. They may be required to obtain local licenses or permits, follow specific recordkeeping practices, or provide local law enforcement agencies with information on all transactions. Pawnshops that handle firearms must also comply with the Brady Handgun Violence Prevention Act, which requires them to conduct background checks on purchasers of firearms, and regulations of the U.S. Department of Justice Bureau of Alcohol, Tobacco and Firearms requiring them to keep a permanent written record of all transactions involving firearms.

Some states impose regulatory requirements or restrictions on check-cashers. These may include licensing, bonding, capital, or recordkeeping requirements, or restrictions on fees charged for cashing checks. Although several states impose limits on

¹⁴ The Talent-Nelson Amendment limits annual interest rates on loans to military borrowers to 36 percent.

check-cashing fees, few of them have limits that are low enough to be considered binding constraints.¹⁵

As of year-end 2007, payday lending was explicitly permitted by law in 38 states and explicitly prohibited in one (Georgia). Eleven states had no payday lending laws, but effectively prohibited payday lending through the application of usury ceilings or small loan interest rate ceilings that rendered payday lending unprofitable. Figure 1 shows the legal status of payday lending for each state as of December 31, 2007.¹⁶

In those states where payday lending is explicitly permitted, payday lenders are typically subject to licensing requirements and regulatory restrictions. Restrictions vary from state-to-state, but may include limitations on the maximum size of a payday loan, the maximum number of loans that can be made to a single customer at one time, the fees that can be charged for a loan, the term of a loan, and the number of times a payday loan may be renewed or “rolled over.”

IV. Review of the Literature

A number of studies have examined the factors affecting the locations of AFSPs. Caskey (1991) uses 1987 state-level data to study the relationship between the number of pawnshops per million capita and various regulatory and demographic characteristics. Considering only the 28 states that had usury ceilings on interest rates, he finds that pawnshops per million capita is positively related to both the level of the state’s interest rate ceiling and the share of the state’s population below the poverty level, and negatively related to the share of the state’s adult population with at least four years of high school

¹⁵ Apgar and Herbert (2006) page II-21.

¹⁶ In 2008, Ohio and New Hampshire passed legislation that effectively prohibits payday lending.

education. He finds no evidence that state laws requiring any surplus from the sale of the pawned collateral to be returned to the borrower (return requirement) or population density influence the number of pawnshops per million capita.

Shackman and Tenney (2006) use 2003 data to extend Caskey's work to all 50 states plus the District of Columbia. Like Caskey (1991), they find a positive relationship between pawnshops per million population and both the poverty rate and the interest rate ceiling and no significant relationship between pawnshop density and the return requirement. However, contrary to Caskey (1991), they do not find any significant relationship between pawnshops per million population and the share of the adult population that are high school graduates.

Graves (2003) examines the locations of payday loan stores and bank branches in seven metropolitan parishes in Louisiana, and in Cook County, Illinois. He finds that payday lenders tend to locate in neighborhoods (Census block groups) that are poorer and have higher concentrations of blacks than the county in which they are located as a whole, while banks tend to locate in neighborhoods that are wealthier and have lower concentrations of blacks than countywide averages.

Burkey and Simkins (2004) examine the determinants of the locations of payday lenders and bank branches in North Carolina, using Zip Code Tabulation Area (ZCTA) level data for 2000. They find that ZCTAs with higher concentrations of blacks, younger populations, lower median incomes, and lower education levels are associated with a higher number of payday lenders and a lower number of banks. At the same time, they find a strong positive relationship between the number of payday lenders and the number

of traditional banks in a ZCTA. This likely reflects the fact that ZCTA population is a strong determinant of the locations of both payday lenders and banks.

Damar (2009) uses ZCTA-level data to look at the determinants of the locations of new payday lending offices in Oregon in 2002-2004. He finds that payday lenders are more likely to locate in areas that have more bank branches, larger populations, and higher percentages of Hispanics. Unlike Graves (2003) and Burkey and Simkins (2004), he does not find evidence that payday lenders are more likely to locate in areas with higher concentrations of blacks.

Temkin and Sawyer (2004) use census tract-level data to investigate the locations of payday lenders, check cashers and pawnshops in seven metropolitan counties distributed across the country and in Washington, DC.¹⁷ They find that AFSPs are disproportionately located in minority and low-income neighborhoods, while banks are disproportionately located in non-Hispanic white and higher-income neighborhoods. At the same time, they find that the majority of AFSPs are located in neighborhoods that are also served by banks.

Apgar and Herbert (2004) examine factors that explain the locations of AFSPs and bank branches in Dallas, Texas in 2003. They find that check cashers, pawnshops and payday lenders are most likely to be found in census tracts with median incomes between \$23,000 and \$45,000 and in tracts where a large fraction of the population is Hispanic or of mixed race; however, they find that citizenship is a stronger predictor of AFSP presence than race or ethnicity. They find that banks are least likely to locate in census tracts where a high fraction of the population is black or Hispanic and most likely

¹⁷ The seven metropolitan counties are associated with the following cities: Chicago, IL; Atlanta, GA; Houston, TX; Kansas City, MO; Los Angeles, CA; Miami, FL; and Memphis, TN.

to locate in tracts with median incomes between \$45,000 and \$63,000. They also find a positive relationship between the presence of bank branches and the presence of AFSPs.

Fellowes and Mabanta (2007) analyze data that they collected over the 2006-2007 time period containing the street addresses of approximately 108,000 bank and credit union branches and 48,000 check cashers, payday lenders, and pawnshops throughout the U.S. They find that more than 90 percent of AFSPs are located within one mile of a bank or credit union branch, and that there are more bank and credit union branches per capita in low-income neighborhoods than in high-income neighborhoods. Based on these findings, they suggest that low- and moderate-income households could accumulate considerable wealth by substituting lower-cost bank and credit union products for higher-priced products obtained from AFSPs.

V. The Geographic Distribution of Financial Service Providers in 2006

I begin my analysis by examining the locations of payday lenders, pawn shops, check cashers, and bank and thrift branches throughout the U.S., as of 2006. Fellowes and Mabanta generously provided data on the number of payday lenders, pawnshops and check cashers operating in each county. Data on the locations of bank and thrift branches were obtained from the FDIC's Summary of Deposits and the Office of Thrift Supervision's Branch Office Survey.

As of 2006, almost every county in the U.S. (98.9 percent of rural counties and 99.6 percent of urban counties) had at least one bank or thrift branch, and about two-thirds of rural counties and ninety percent of urban counties had at least one alternative financial service provider (pawnshop, check casher, or payday lender). The average rural

county in the U.S. had a population of about 33,000 and was served by 2.5 payday loan stores, 1.2 pawnshops, 1.7 check-cashing outlets, and 10.7 bank and thrift branches. The average urban county was home to about 220,000 people, 16.6 payday loan stores, 7.4 pawnshops, 21.2 check cashers, and 67.5 bank and thrift branches.

The geographic distributions of the numbers of payday lending stores, pawnshops, and check-cashing outlets per million capita, at the county level, are shown in figures 2 through 4, respectively. The highest concentrations of payday lending stores on a per capita basis are in those southern states that do not explicitly or effectively prohibit payday lending – Alabama, South Carolina, Tennessee, Mississippi and Louisiana. The number of pawnshops per capita is also relatively high in the south, particularly Georgia, Alabama, Mississippi and Tennessee. The number of check-cashing outlets per capita shows a somewhat different pattern, being highest in California, Delaware, Mississippi and North Carolina.

The geographic distribution of the number of bank and thrift branches per million capita, shown in figure 5, exhibits a very different pattern, being highest in the north central part of the country, especially Kansas, Nebraska and North Dakota. Although these maps might suggest a negative correlation between the number of bank branches per capita and the number of each type of alternative financial service provider per capita, the correlations are not significantly different from zero for check cashers and pawnshops, and significantly positive for payday lending stores.¹⁸

¹⁸ The Pearson Correlation Coefficient between the number of bank branches per capita and the number of check-cashers per capita is 0.001, and that between the number of bank branches per capita and the number of pawnshops per capita is 0.008; both of these are statistically insignificant. The remaining correlations among different types of financial service providers per capita are all positive and significant at the 0.0001 level, with the following magnitudes: 0.37 between check-cashers and pawnshops, 0.57 between check-cashers and payday lenders, 0.40 between pawnshops and payday lenders, and 0.12 between banks and payday lenders.

Using credit score data obtained from Equifax, figure 6 shows the share of each county's population with either no credit score or a credit score that would typically place them in the subprime market. The concentration of these credit-challenged individuals is highest in some of the same states that have high concentrations of AFSPs, notably Georgia, South Carolina and Mississippi. This suggests that AFSPs may tend to locate in areas where demand for their services is likely to be high because a significant portion of the population does not have access to more traditional sources of credit.

VI. Determinants of the Locations of AFSPs

In order to better understand the factors influencing the location decisions of AFSPs, I model the number of AFSP outlets per million population in each county as a function of various demographic characteristics of the county's population (racial/ethnic mix, age, education, poverty status, population density), measures of the population's creditworthiness, and variables reflecting the state regulatory environment.¹⁹ The following reduced form equation is estimated separately for each type of alternative financial service provider (payday lenders, pawnshops and check cashers), for both urban and rural counties, using OLS:

Equation 1

$$AFSP_i = \beta_0 + \beta_1 HISPANIC_i + \beta_2 BLACK_i + \beta_3 ASIAN_i + \beta_4 YOUNG_i + \beta_5 HSDIPLOMA_i + \beta_6 POVERTY_i + \beta_7 NOSCORE_i + \beta_8 LOWSCORE_i + \beta_9 MEDSCORE_i + \beta_{10} POPDENS_i + \beta_{11} CEILING_i + \beta_{12} NOPAYDAY_i + \varepsilon_i$$

¹⁹ The demographic data were obtained from the Census Bureau; the creditworthiness measures were constructed from credit score data obtained from Equifax; and the information on state laws and regulations was gathered from various state government websites.

$AFSP_i$ indicates the number of AFSP stores of a particular type per million population in county i . $HISPANIC_i$, $BLACK_i$ and $ASIAN_i$ represent the percentages of the county population that are Hispanic, non-Hispanic black, and Asian, respectively. $YOUNG_i$ indicates the percentage of the county population that is below the age of 40.

$HSDIPLOMA_i$ and $POVERTY_i$ represent the percentages of the county population that have a high school diploma and that live below the poverty level, respectively.

$NOSCORE_i$, $LOWSCORE_i$ and $MEDSCORE_i$ are measures of the creditworthiness of the county's population. They indicate the share of the population with no credit score, a credit score that would typically place them in the subprime market, and a credit score that would typically place them in the Alt-A market, respectively. $POPDENS_i$ is the population per square mile in county i .

$CEILING_i$ and $NOPAYDAY_i$ are variables reflecting state laws or regulations that directly affect AFSPs. $CEILING_i$ appears only in the equations explaining the locations of payday lenders and pawnshops, and is constructed differently for each of these equations. In the payday lender equation it is based on the interest rate ceiling that would apply to a \$300, two-week payday loan. In the pawnshop equation it is based on the interest rate ceiling that would apply to a \$100, one-month pawn loan. In each case, $CEILING_i$ is set equal to zero if the county is located in a state that does not regulate the interest rates charged on that particular type of loan (payday or pawn) or in a state with an interest rate ceiling for a \$300 two-week payday loan or a \$100 one-month pawn loan that is above 25 percent of the loan value. In all other cases, $CEILING_i$ is set equal to 25% minus the maximum allowed interest rate in the state in which the county is located. Thus a *higher* value of $CEILING_i$ indicates a *more stringent* (lower) limit on the interest

rate that can be charged on the particular type of loan. *NOPAYDAY_i* appears only in the equations explaining the locations of pawnshops and check cashers; it is a dummy variable equal to one if the county is in a state that explicitly or effectively prohibits payday lending, and zero otherwise. Variable definitions are summarized in table 1.

The results of estimating various versions of Equation 1 are presented in table 2. Looking first at the equations explaining the number of payday loan stores per million capita (columns 1 and 2) we see that the results are fairly similar for urban and rural counties. In both cases the number of payday loan stores per million capita is negatively related to the share of the population that is Hispanic, positively related to the share of the population that is non-Hispanic black, and unrelated to the share that is Asian. Payday lenders are more prevalent in both urban and rural counties where a larger share of the population is below the age of 40 and less prevalent in both urban and rural counties where a larger share of the population lives below the poverty level. The number of payday loan stores per million capita is significantly related to the share of the population with a high school diploma (negative sign) and population density (positive sign) in rural, but not urban, counties.

The variables measuring the creditworthiness of the county's population and the state regulatory environment are important in both equations. In urban markets, the estimated coefficients on *NOSCORE* and *LOWSCORE* are positive and highly significant, and the coefficient on *MEDSCORE* is positive but insignificant. In rural markets, the coefficients on all three credit score variables are positive and significant at either the .05 or the .10 level. This suggests that payday loan stores are more prevalent in areas where a substantial share of the population may have difficulty accessing traditional

sources of credit. The estimated coefficient on *CEILING* is negative and highly significant in both urban and rural counties, indicating that in states with more stringent (lower) interest rate ceilings on payday loans there are fewer payday loan stores per capita.

Turning next to the pawnshop equations (columns 3 and 4), we see that the relationships between demographic factors and the number of pawnshops per capita differ substantially between urban and rural counties. In urban counties, the variables reflecting the racial/ethnic mix of the population are all statistically insignificant, whereas in rural counties the estimated coefficients on *HISPANIC* and *BLACK* are both negative and highly significant. The estimated coefficient on *YOUNG* is positive and highly significant in urban counties, but insignificantly different from zero in rural counties. The estimated coefficient on the variable measuring the share of the county population with a high school diploma is negative in both cases; it is marginally significant in urban counties and highly significant in rural counties. The estimated coefficient on *POVERTY* is negative and highly significant in urban counties, but insignificantly different from zero in rural counties. *POPDENS* has a small, negative, marginally significant coefficient in urban counties and a larger, positive, highly significant coefficient in rural counties.

The relationships between the number of pawnshops per capita and both the credit score variables and the state regulation variables are largely similar in urban and rural counties. The estimated coefficients on *NOSCORE* and *LOWSCORE* are positive and highly significant in both urban and rural counties; the estimated coefficients on *MEDSCORE* are negative in both cases, and either marginally significant or insignificant.

The estimated coefficients on *CEILING* are negative and highly significant in both rural and urban counties, indicating that pawnshops are less prevalent in states that have stricter limits on the interest rates that can be charged on pawn loans. The estimated coefficients on *NOPAYDAY* are positive and insignificant in both cases, suggesting that, other things being equal, a prohibition on payday lending does not lead to a significant increase in the number of pawnshops per capita.

Determinants of the number of check-cashing outlets per capita (columns 5 and 6) differ considerably between urban and rural counties. In urban counties, the concentration of check-cashing outlets is positively related to the shares of the population that are Hispanic, non-Hispanic black, Asian, and under the age of 40; in rural counties the number of check cashers per capita is negatively related to the share of the population that is Hispanic, positively related to the share that is non-Hispanic black, and unrelated to the shares that are Asian or young. In both types of county the number of check cashers per capita is negatively related to the share of the population with a high school diploma and the share that is below the poverty level. The density of check-cashing outlets is positively related to population density in rural counties, but not in urban counties. The number of check-cashing outlets per capita is significantly positively related to the share of the population with no credit score in both urban and rural counties. Estimated coefficients on *LOWSCORE* and *MEDSCORE* are either marginally significant or insignificant in the two equations, with the sign on the latter variable differing between urban and rural counties. The estimated coefficient on *NOPAYDAY* is negative in both types of county, but is significantly different from zero only in rural counties.

Although there is variation across the three types of AFSPs examined and between urban and rural counties, a few general patterns emerge. (i) AFSPs are more likely to locate in counties where a large share of the population has no credit rating or (for payday lenders and pawnshops) a low credit rating and in counties where a large share of the population lacks a high school diploma; (ii) AFSPs generally avoid areas with a large fraction of the population living below the poverty level; (iii) there is no evidence that AFSPs (with the exception of check cashers in urban counties) concentrate in areas with large Hispanic populations – in fact, the concentrations of all three types of AFSPs in rural markets and payday lenders in urban markets are significantly negatively related to the share of the population that is Hispanic; (iv) the concentrations of payday lenders and check cashers (but not pawnshops) are higher in areas with large non-Hispanic black populations; (v) population density is a strong predictor of locations per capita in rural counties, but not in urban counties; and (vi) more stringent limits on the rates that can be charged for payday (pawn) loans are associated with reductions in the number of payday lending stores (pawnshops) per capita.

VII. Conclusion

A large segment of the population relies on alternative financial service providers as a source of credit products or transaction services. While some view these firms as filling a niche which traditional financial service providers have chosen to avoid, others view them as targeting and preying upon economically vulnerable members of society. A number of studies have examined the determinants of the locations of AFSPs in an effort to distinguish between these two views. Those studies generally find that AFSPs are

more likely to locate in areas where the population is disproportionately poor, minority, and poorly educated. At the same time, a small number of studies that include a measure of bank presence find a positive relationship between the number of bank branches and the number of AFSP outlets.

The present study expands upon the existing literature by using a new, more comprehensive data set to study AFSP location and by introducing some important new variables to the analysis. The results support some of the findings from previous studies, but contradict others. Consistent with the prior research, I find that AFSPs are more prevalent in areas where a large percentage of the population is black or lacks a high school diploma. However, contrary to previous studies, I find that AFSPs generally avoid the poorest areas and areas with high concentrations of Hispanics. Credit scores are found to be a strong predictor of AFSP concentration: counties where a larger percentage of the population has no credit score have a greater density of all three types of AFSPs examined, while counties where a larger percentage of the population has a credit score that would place them in the subprime category have increased concentrations of both payday lenders and pawnshops. This finding suggests that AFSPs may simply locate where the demand for their services is likely to be greatest because a significant portion of the population does not qualify for more mainstream (and less expensive) forms of credit. However, further research is needed to more fully assess the competing claims made by industry critics and supporters regarding the behavior of AFSPs. Finally, state laws and regulations governing AFSPs appear to have a significant effect on the number of AFSPs per capita. More stringent limits on the interest rates that

can be charged on payday loans (pawn loans) are associated with significantly fewer payday lenders (pawnshops) per capita.

References

- Apgar, William C., Jr. and Christopher E. Herbert. "Subprime Lending and Alternative Financial Service Providers: A Literature Review and Empirical Analysis," Prepared for U.S. Department of Housing and Urban Development, Office of Policy Development and Research by Abt Associates, Inc., Cambridge, MA, 2004.
- Burkey, Mark L. and Scott P. Simkins. "Factors Affecting the Location of Payday Lending and Traditional Banking Services in North Carolina," *Review of Regional Studies*, 34(2), 2004, pp. 191-205
- Caskey, John P. *Fringe Banking: Check-Cashing Outlets, Pawnshops, and the Poor*, Russell Sage Foundation, New York, 1994.
- Caskey, John P. "Fringe Banking a Decade Later," unpublished manuscript, 2003.
- Caskey, John P. "Pawnbroking in America: The Economics of a Forgotten Credit Market," *Journal of Money, Credit and Banking* 23(1), 1991, pp. 85-99.
- Damar, H. Evren. "Why Do Payday Lenders Enter Local Markets? Evidence from Oregon," *Review of Industrial Organization* 34(2), 2009, pp. 173-191.
- Elliehausen, Gregory. "Consumers' Use of High-Price Credit Products: Do They Know What They Are Doing?" Networks Financial Institute At Indiana State University Working Paper 2006-WP-02, May 2006.
- Fellowes, Matt and Mia Mabanta. "Banking on Wealth: America's New Retail Banking Infrastructure and Its Potential for Building Wealth," Brookings Institution, unpublished manuscript, October 2007.
- Graves, Steven M. "Landscapes of Predation, Landscapes of Neglect: A Location Analysis of Payday Lenders and Banks," *The Professional Geographer*, 55(3) 2003, pp. 303-317.
- Shackman, Joshua D. and Glen Tenney. "The Effects of Government Regulations on the Supply of Pawn Loans: Evidence from 51 Jurisdictions in the U.S." *Journal of Financial Services Research*, 30(1), 2006, pp. 69-91.
- Stephens, Inc. *Payday Loan Industry Annual Industry Update*, 2007.
- Temkin, Kenneth and Noah Sawyer. "Analysis of Alternative Financial Service Providers," Prepared for The Fannie Mae Foundation by the Urban Institute Metropolitan Housing and Communities Policy Center, 2004.

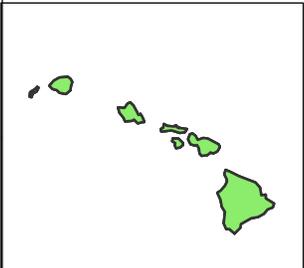
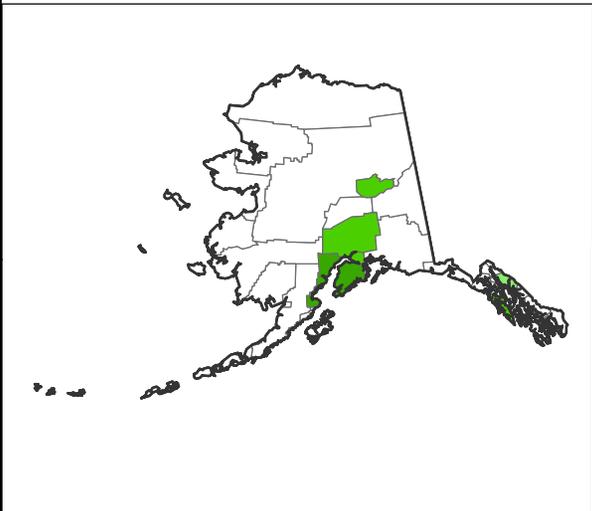
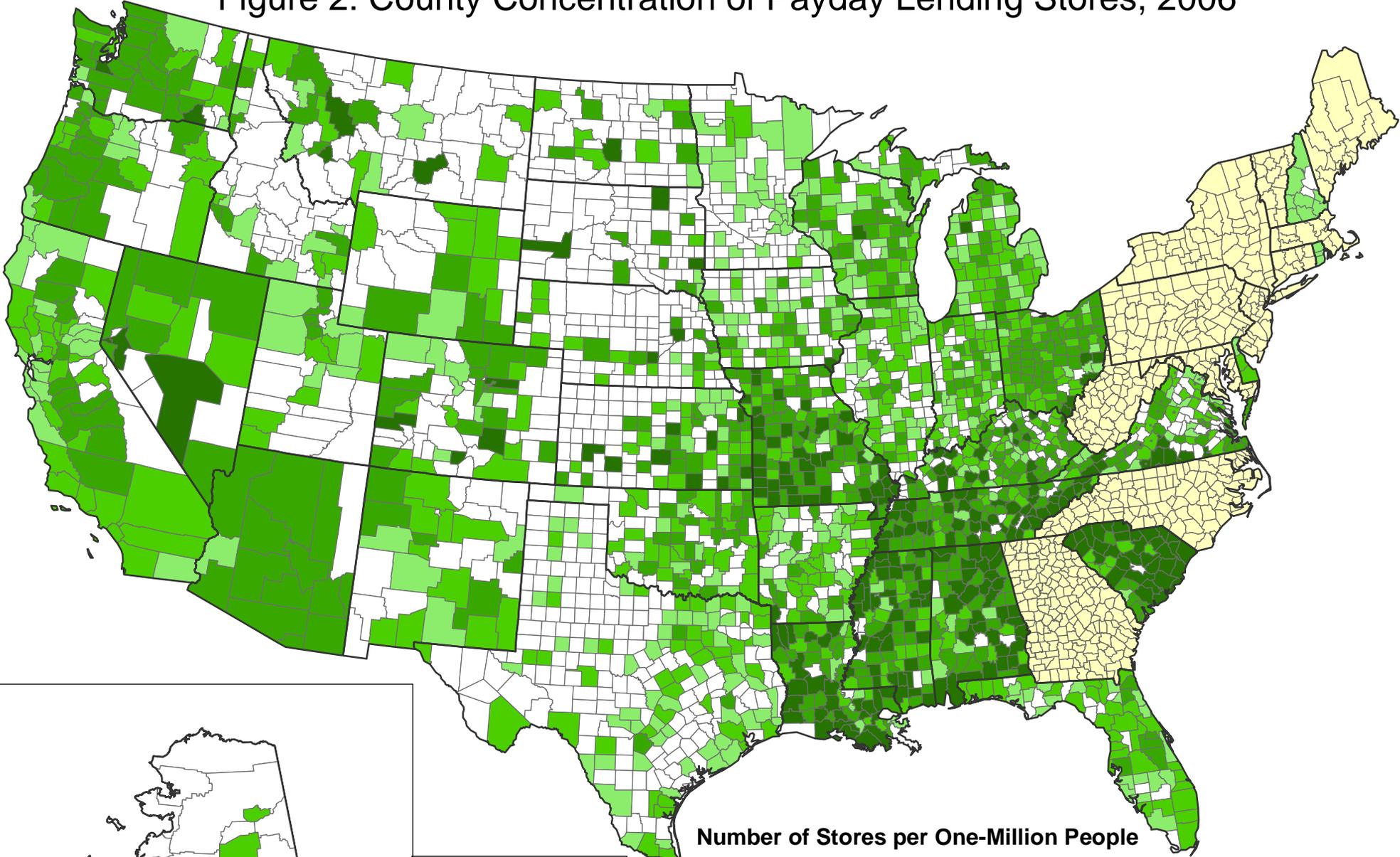
Table 1: Variable Definitions

HISPANIC	Share of county population that is Hispanic (%)
BLACK	Share of county population that is non-Hispanic black (%)
ASIAN	Share of county population that is Asian (%)
YOUNG	Share of county population below the age of 40 (%)
HSDIPLOMA	Share of county adult population with a high school diploma (%)
POVERTY	Share of county population living below the poverty level (%)
NOSCORE	Share of county population that does not have a credit score (%)
LOWSCORE	Share of county population with a credit score that would typically place them in the subprime market (%)
MEDSCORE	Share of county population with a credit score that would typically place them in the Alt-A market (%)
POPDENS	Population per square mile in the county
CEILING (Payday or Pawn)	Defined separately for payday and pawn loans. Based on interest rate ceiling applied to a \$300, 2-week payday loan or a \$100, 1-month pawn loan. Equal to zero if county does not regulate interest rates on payday (pawn) loans or has a rate ceiling greater than 25% of the loan value; equal to 25% minus maximum allowed interest rate if county is in a state that has a rate ceiling of 25% or less.
NOPAYDAY	Dummy variable equal to 1 if county is in a state that explicitly or effectively prohibits payday lending; zero otherwise

Table 2: OLS Estimation Results

	Payday Loan Stores Per Million Capita		Pawnshops Per Million Capita		Check Cashers Per Million Capita	
	Urban	Rural	Urban	Rural	Urban	Rural
INTERCEPT	-119.99 (-1.61)	34.77 (0.77)	-27.02 (-0.93)	53.90*** (2.66)	128.33*** (2.70)	102.67*** (3.99)
HISPANIC	-1.53*** (-3.01)	-0.80*** (-2.67)	0.24 (1.12)	-0.57*** (-3.98)	0.82** (2.34)	-0.37** (-2.05)
BLACK	0.63* (1.94)	1.57*** (7.80)	-0.06 (-0.52)	-0.35*** (-4.06)	1.21*** (6.02)	1.10*** (9.89)
ASIAN	-1.11 (-0.92)	0.40 (0.30)	-0.42 (-0.87)	1.02 (1.54)	4.18*** (5.27)	0.69 (0.82)
YOUNG	3.69*** (4.73)	1.31** (2.56)	1.22*** (4.02)	0.13 (0.56)	1.06** (2.12)	-0.10 (-0.32)
HSDIPLOMA	-0.32 (-0.53)	-1.28*** (-3.62)	-0.37* (-1.66)	-0.88*** (-5.66)	-2.05*** (-5.54)	-1.43*** (-7.23)
POVERTY	-1.63* (-1.70)	-1.57*** (-3.36)	-1.42*** (-4.18)	-0.19 (-0.88)	-1.40** (-2.50)	-0.80*** (-2.95)
NOSCORE	3.46*** (2.84)	1.08* (1.66)	2.49*** (5.28)	1.20*** (3.98)	4.72*** (6.08)	1.28*** (3.34)
LOWSCORE	3.34*** (3.72)	0.95** (2.40)	1.86*** (5.79)	0.89*** (5.10)	-0.96* (-1.82)	-0.29 (-1.32)
MEDSCORE	0.35 (0.18)	1.90** (2.42)	-1.40* (-1.77)	-0.24 (-0.67)	-1.78 (-1.39)	0.80* (1.79)
POPDENS	-0.001 (-0.34)	0.55*** (10.58)	-0.001* (-1.86)	0.10*** (4.61)	-0.001 (-0.77)	0.28*** (10.34)
CEILING	-4.50*** (-6.53)	-2.53*** (-5.97)	-1.50*** (-9.45)	-1.23*** (-9.15)	----	----
NOPAYDAY	----	----	2.32 (0.81)	1.68 (0.61)	-7.66 (-1.64)	-11.90*** (-3.40)
# of Obs	759	1535	1068	1906	1068	1906
Adj R ²	0.22	0.29	0.28	0.18	0.24	0.25
T-statistics in parentheses.						
*, **, *** indicate statistical significance at the 0.10, 0.05, and 0.01 levels, respectively.						

Figure 2: County Concentration of Payday Lending Stores, 2006



Number of Stores per One-Million People

- Payday Lending Prohibited
- No Stores
- Less than 50
- 50 to 100
- 100 to 200
- 200 or more

Figure 3: County Concentration of Pawnshops, 2006

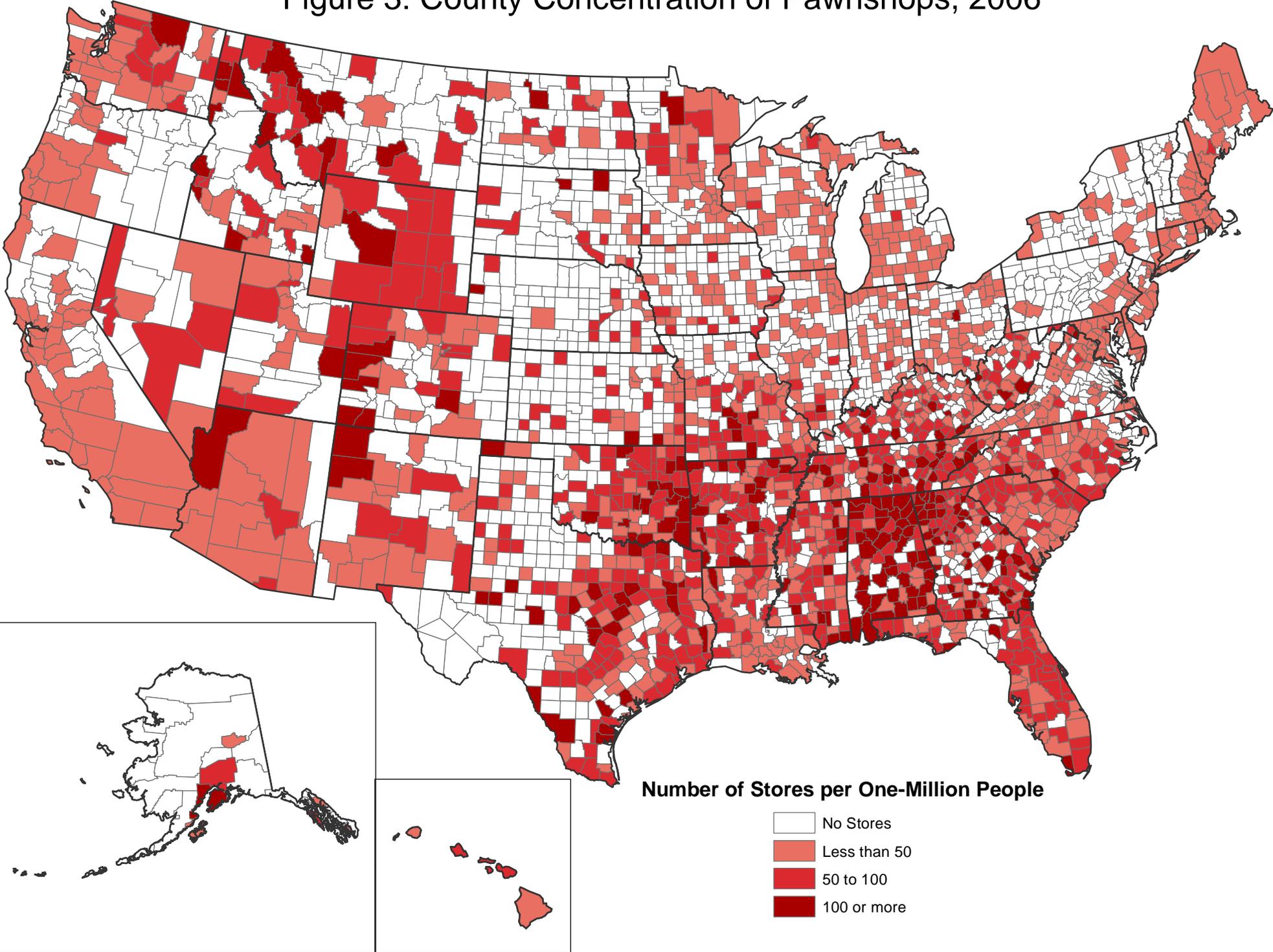


Figure 4: County Concentration of Check-Cashing Outlets, 2006

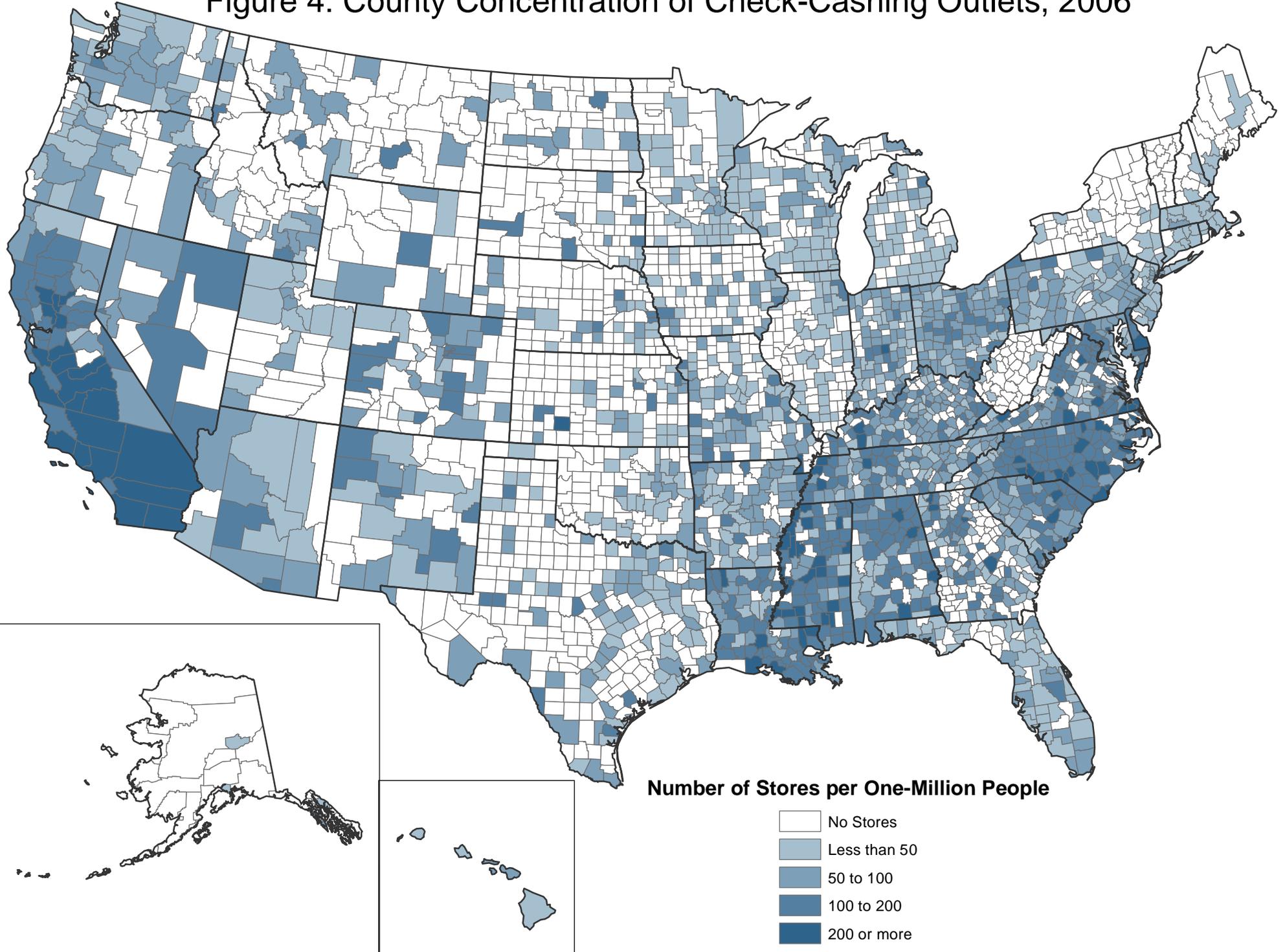


Figure 5: County Concentration of Bank and Thrift Branches, 2006

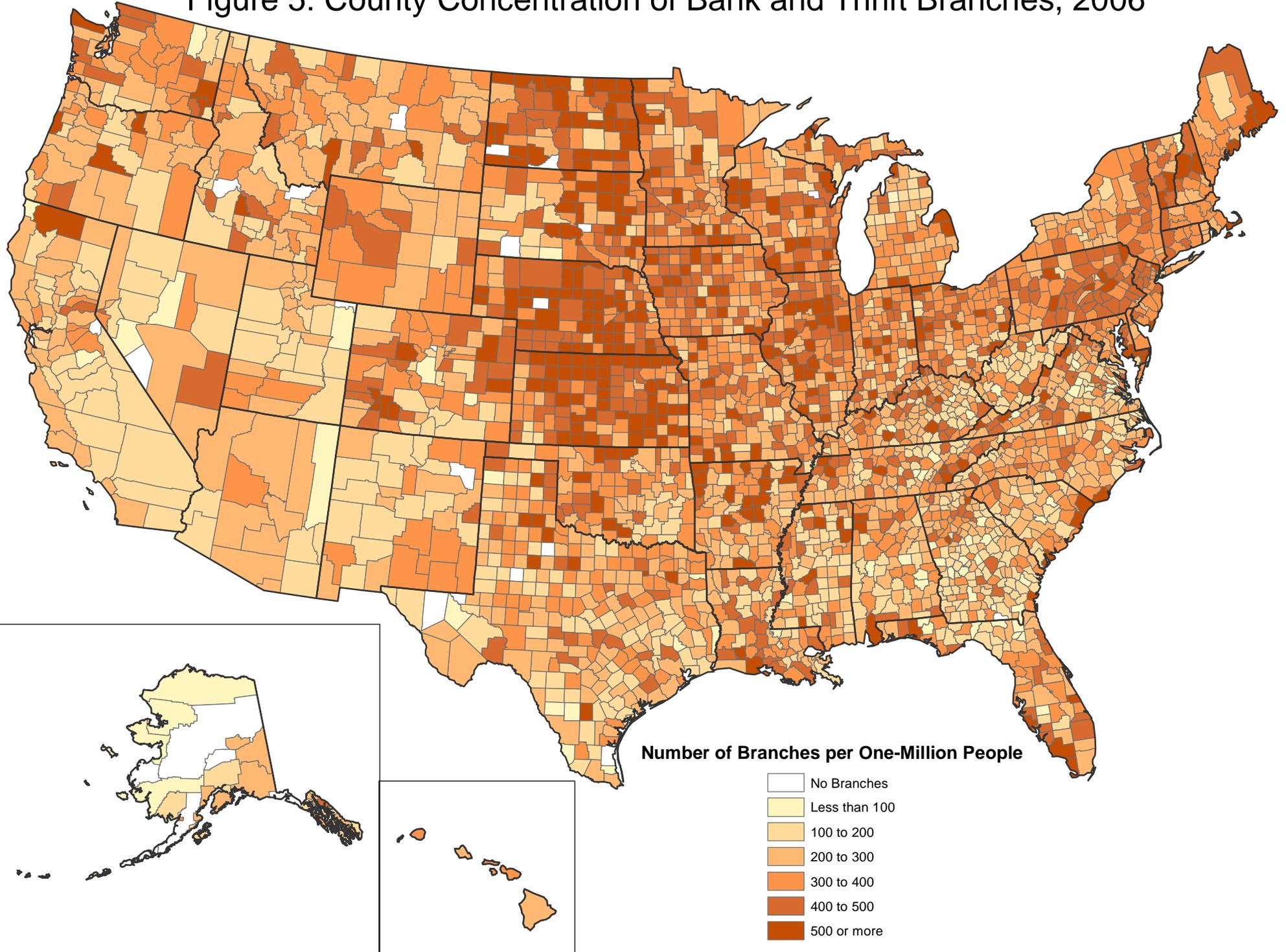
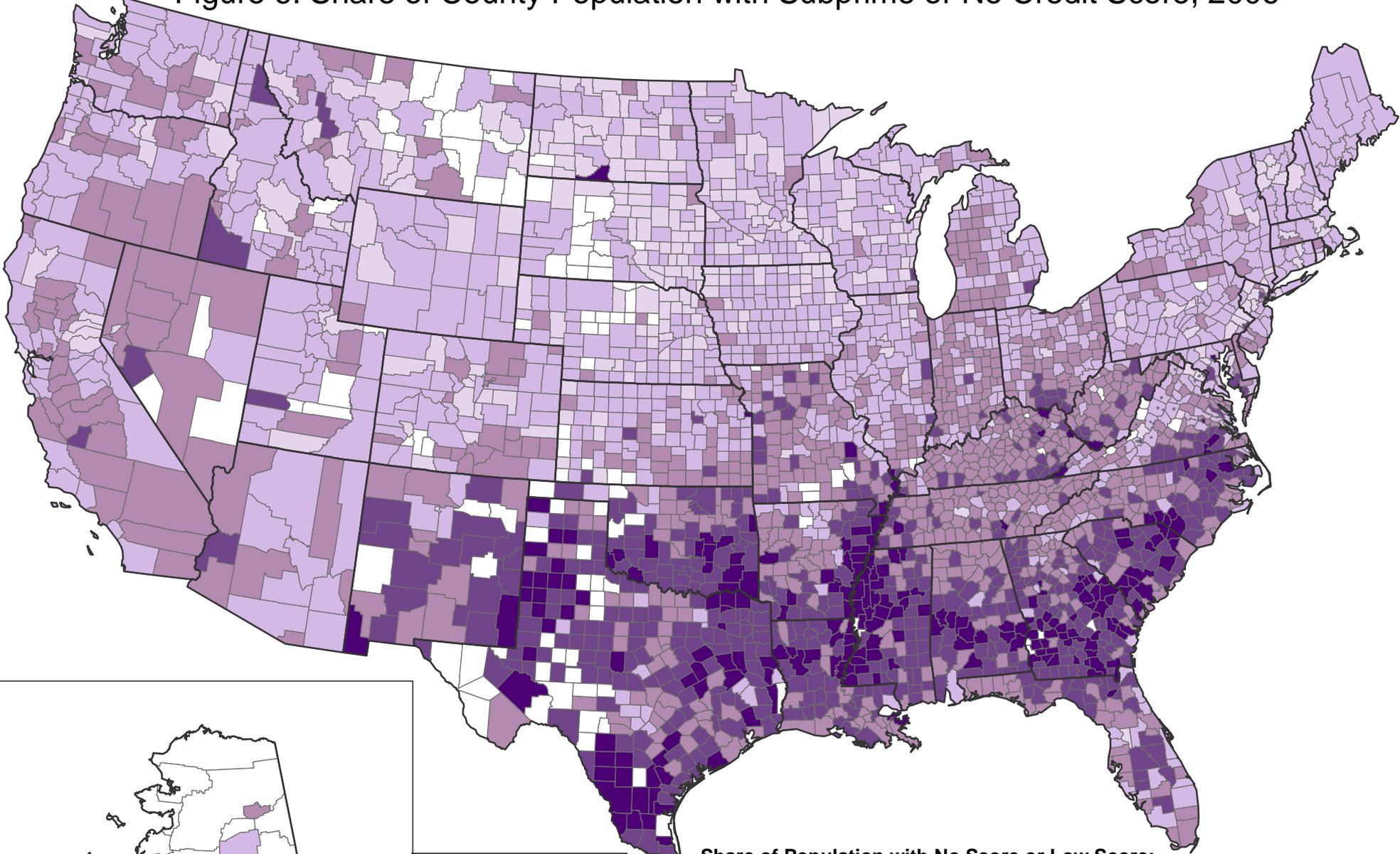


Figure 6: Share of County Population with Subprime or No Credit Score, 2006



Share of Population with No Score or Low Score:

-  No Information
-  Less than 20%
-  20% to 30%
-  30% to 40%
-  40% to 50%
-  50% or more