Growing Up Without Finance

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Abstract

Early-life exposure to local financial institutions increases household financial inclusion and improves financial health thereafter. We identify the effect of local financial markets using an externally-imposed law that led to sharp differences in credit market development across Native American reservations in the U.S. Individuals growing up on reservations with less financial development enter formal credit markets later and, as a result, have persistently lower credit scores. Although financial health improves after moving from a reservation, it takes longer than a decade before the credit scores of individuals leaving areas with weak local financial markets fully converge with other borrowers.

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Household finances have important implications for asset price fluctuations, business cycle dynamics, and entrepreneurial activity (e.g., Campbell and Hercowitz, 2009; Mian and Sufi, 2011; Iacoviello and Pavan, 2013; Corradin and Popov, 2015), as well as first-order effects on consumer welfare (e.g. Melzer, 2011; McDevitt and Sojourner, 2016). Yet, the wide variation in consumer financial health is puzzling. Even when the U.S. unemployment rate was as low as 4.5 percent (2006Q4), as many as 70 million people, or 32 percent of individuals over 18 with a credit score, had a credit history that would have been considered subprime. Because income shocks appear insufficient to explain the variation in credit market outcomes, recent research considers the influence of financial education (e.g., Brown et al. (2016)) or behavioral biases (e.g., Stango and Zinman, 2011; Keys and Wang, 2015) on financial well-being. However, even these individual attributes cannot fully explain the wide variation in credit outcomes across households.

In this paper, we examine a potentially important and largely unexplored determinant of household financial health – early-life exposure to financial markets through local financial institutions. Although evidence from other settings suggests that experience with financial markets should have broad effects on household financial well-being (see Malmendier and Nagel, 2011; Anagol, Balasubramaniam, and Ramadorai, 2015), identifying the effect of financial development on household financial health is challenging because exogenous shocks to financial development are rare. Even regulatory changes that affect lending activity are themselves not random, and often coincide with other economic factors that influence the supply and demand for credit.[1] Furthermore, it is difficult to construct micro-level measures of financial health that are both geographically precise and comparable across households.

We confront these empirical challenges using micro-level consumer credit data from

[1]For example, the CARD Act of 2009 was enacted precisely because of problems with how individual consumers used credit cards, but nonetheless had sweeping effects on consumer financial health (see Agarwal et al. (2015) or Keys and Wang (2015)).

the FRBNY Consumer Credit Panel – a 5 percent sample of consumer credit records from Equifax – to examine how exposure to financial markets at a young age affects household financial health. Our tests utilize stark long-run differences in banking development that arose exogenously across Native American reservations in the United States. This variation in financial development can be attributed to Congressional legislation called Public Law 280 (PL280), passed in 1953. PL280 imposed state court enforcement of debt contracts on a subset of reservations, leaving tribal courts in place for the remaining (non-PL280) reservation areas (Anderson and Parker, 2008). After the law's passage, the development of local banking markets diverged sharply across reservations with state and tribal courts, owing to the greater predictability of debt contract enforcement under state courts. In particular, Brown, Cookson, and Heimer (2016b) find that banking density (bank branches per capita) is substantially higher in areas with state courts. As a result, young borrowers on PL280 reservations were exposed to much more robust local financial markets than were their counterparts on reservations with tribal courts.

Moreover, an important advantage of our setting is that PL280 did not change how most *consumer* credit contracts are enforced. This is because – in contrast to the debt contracts issued by local financial institutions, which are enforced by state or tribal courts – most consumer credit contracts fall under federal jurisdiction regardless of PL280 status. Thus, the factors that led to the stark differences in local banking and branching across reservations did not also directly affect how households access most consumer credit products (e.g., credit cards or student loans). In other words, the setting affords us the opportunity to examine how greater local financial development affects the financial behaviors of households without the usual concern that local financial development was a response to those financial decisions.

In addition, the reservation setting has a number of other advantages for studying the connections between financial development and consumer credit outcomes. First, Congress imposed PL280 without the approval or consent from tribes, so tribes did not select into different institutional environments. Second, state court assignment under PL280 was unrelated to credit markets or economic activity on reservations at the time the law was passed, and indeed PL280 and non-PL280 reservations were almost identical in all important respects in the years immediately preceding the law's passage (e.g., Parker, 2012; Brown, Cookson, and Heimer, 2016b). Third, though cross-reservation variation in financial development is stark, reservations are similar on other potentially relevant dimensions, owing to their shared cultures and same exposure to the broader U.S. institutional environment.

We start by showing that the relative underdevelopment of local finance on tribal court reservations leads to less financial inclusion, as measured by the use of formal accounts among individual consumers. Specifically, households located on reservations with weaker local banking markets (under tribal courts) are 10 percentage points more likely to have a thin or missing credit report, and consumers growing up on these reservations are significantly older when they first engage with formal credit markets. Moreover, young borrowers with low credit scores in tribal court areas are 8 percentage points less likely to see their credit applications approved than young borrowers in state court areas, an effect that deepens during periods of expanded credit supply (pre-and post-Great Recession).

These stark differences in financial inclusion among young borrowers are driven by exposure to local financial markets rather than demand-side factors. In support of this interpretation, our findings are robust to controlling for Census tract income and employment, two proxies for the local demand for credit. Relating to the financial channel more specifically, our results are strongest in states that are slow to deregulate the banking sector following the Interstate Bank Branching Efficiency Act (IBBEA). IBBEA expanded bank branching without significantly affecting demand conditions (Celerier and Matray, 2015 and Rice and Strahan, 2010). Hence, if exposure to local finance is the source of the differences in financial health we observe across reservations, we should expect to see stronger relative effects of IBBEA in tribal court areas, closing the gap in financial inclusion.

These differences in financial inclusion lead to persistent differences in consumer financial health. Average credit scores among young borrowers located in tribal court areas are about 18 points lower than for young borrowers on state court reservations. To empirically distinguish the effect of growing up with less exposure to financial markets from unobservable differences in borrower quality, we examine how credit outcomes evolve over time for young borrowers who move away from reservations. Young borrowers leaving tribal court areas see a sharper increase in the likelihood of obtaining a credit line than young borrowers leaving state court areas, and their credit scores eventually improve by approximately 20 points. Because individuals leaving state and tribal court areas are almost identical in terms of indicators of credit demand (e.g., size and number of accounts, frequency of delinquencies), these results are best explained by the development of local financial markets rather than differences in borrower financing needs or quality across individuals with different reservation backgrounds.

Despite the large improvements in financial health for consumers who move away from areas with low financial development, the benefits are slow to accrue. Our estimates suggest that it takes more than a decade for the financial health of individuals from weak financial environments (under tribal courts) to fully converge to the financial health of consumers from stronger financial environments (under state courts). These findings show that consumer financial health is affected not only by the individual's current financial environment, but also by the strength of the financial markets they encountered growing up. In addition, the slow convergence we document for movers from tribal court areas rules out a number of potential alternative explanations for our findings. In particular, if only the best credit risks select out of reservation areas, improvements in credit outcomes should appear immediately.

These findings provide some of the first causal evidence linking the local provision of finance across institutional environments with consumer financial health. This evidence offers a new perspective on the real consequences of financial development (e.g., King and Levine, 1993 and Levine, Loayaza, and Beck (2000)). Although a longstanding literature offers compelling evidence that financial development affects firm performance and aggregate economic growth (Levine, 2005 surveys the literature), there is much less evidence on the implications of financial development for household financial health and consumer-level outcomes.[2] Our work shows that household credit outcomes benefit from financial market development, most notably via higher credit scores and more success turning credit applications into new loans. Moreover, our findings suggest these consumer-side benefits are not just the result of better direct access to local bank loans: Growing up around more finance appears to have a positive impact on the way consumers build and manage credit, a benefit of financial development not emphasized in prior work.

Our study is particularly relevant for the strand of the financial development literature that focuses on financial inclusion, access to banking services, and the economic effects of stronger local financial markets (e.g., Javaratne and Strahan 1996; Guiso, Sapienza, and Zingales 2004; Beck, Demirguc-Kunt, and Peria 2007; Krishnan, Nandy, and Puri 2014; Cortes 2014; Berger et al. 2015; Allen et al. 2016). Understanding the effects of local financial markets is particularly important given the shift toward consolidation and the nationalization of financial activity in recent years (e.g., Hakenes et al., 2015; Akkus, Cookson, and Hortacsu, 2015).[3] Several prior studies find that a more developed local financial market benefits young and small firms (Strahan and Rice, 2010), and our work shows that it also has long-term benefits for young individuals.

In this way, our paper adds to an important literature on the long-run effects of early exposure to particular economic and institutional environments. For example, studying the financial behavior of immigrants to the United States, Osili and Paulson (2008) find that early exposure to institutions that protect private property has a persistent effect on their

[2]Much of the research on consumer credit focuses on the pros and cons of access to high interest rate loans, particularly for low-income borrowers (e.g., Karlan and Zinman (2010) and Morse (2011)). A related literature studies how access to finance influences how much consumers are willing to pay for loans in the first place (Butler, Cornaggia, and Gurun, 2015).

[3]The changing nature of local financial activity has also been widely discussed in the popular press. For example, see Minyoung Park, "America's brick-and-mortar banks are vanishing," Yahoo Finance, June 22, 2016 (article here).

propensity to own stock, while Knüpfer, Rantapuska, and Sarvimäki (2016) and Kuhnen and Miu (2016) show that formative experiences and socioeconomic status, respectively, have long-term effects on stock market participation and willingness to take financial risk.[4] In a distinct but related vein, our work shows that a person's formative local financial environment has long-term effects on financial health, and these effects persist for many years even after the person moves to a different institutional setting.

Our work is also part of a growing literature that uses quasi-natural experiments and within-country variation to evaluate the economic effects of institutions, financial markets, and legal rules (e.g., Barro and Sala-i Martin 1992; Berkowitz, Lin, and Ma 2014). Our paper is most directly related to the portion of this literature that studies differences in contracting, organizational forms, and economic outcomes on Native American reservations (e.g., Karpoff and Rice 1989; Anderson and Leuck 1992; Cookson 2014; Dimitrova-Grajzl et al. 2014; Dippel 2014). Though some of this research focuses specifically on the implications of PL280 for economic and financial development across reservations (e.g., Anderson and Parker 2008; Parker 2012; Brown, Cookson, and Heimer 2016b), our study is the first to exploit this setting to provide a comprehensive evaluation of the causal linkages between local financial markets and consumer financial health.

The rest of the paper proceeds as follows. Section 1 provides background details on Native American institutions, as context for the empirical analysis. Section 2 describes the data sources we employ and explains how we map consumer credit outcomes to reservation areas. Section 3 presents evidence on consumer credit coverage, while Section 4 studies the long-term consumer financial health effects of local financial development. Section 5 summarizes our findings.

[4] A related literature studies how individual and professional experiences influence a wide array of behaviors, including investment and managerial decision making (e.g., Greenwood and Nagel 2009; Malmendier, Tate, and Yan 2011; Chiang et al. 2011; Cole, Paulson, and Shastry 2014; Dittmar and Duchin 2015; Bernile, Bhagwat, and Rau 2015) and political preferences (Giuliano and Spilimbergo 2014; Fuchs-Schudeln and Schundeln 2015). Several papers consider the role of genetics on financial behaviors (Cronqvist and Siegel, 2015, Black et al., 2015 and Grinblatt, Keloharju, and Linnainmaa, 2012). Other research considers financial attitudes, such as trust and ambiguity aversion (Giannetti and Wang (2016); Gurun, Stoffman, and Yonker (2015); Dimmock et al. (2016)), and financial literacy (Lusardi and Mitchell (2011)).

1 Reservation Economies

This section provides some background on the implementation and documented effects of Public Law 280. Our discussion of reservation institutions and PL280 borrows heavily from Brown, Cookson, and Heimer (2016b).

1.1 Reservation Institutions and Public Law 280

Native American reservations are an ideal setting to study how financial development affects household financial health. Reservations have a limited form of sovereignty in that they are generally not subject to state laws or regulations, while still being subordinate to the rule of the U.S. federal government. Arising from a federal policy commitment to tribal sovereignty, the historical status quo is that each reservation runs its own tribal court to enforce the law on that reservation.[5] In addition, reservations are relatively homogenous on unmeasured dimensions due to similar culture and long-term exposure to American institutions, a stark contrast to the extensive heterogeneity in the cross-national setting.

Although reservations have considerable political autonomy, the U.S. Congress passed Public Law 280 in 1953, mandating that a subset of reservations in select states would be subject to jurisdiction by state courts.[6] Legal scholars have suggested that Congress passed PL280 because of a perceived need for stronger criminal enforcement on reservations. According to a 1953 Senate report on PL280:

> "[... T]he enforcement of law and order among the Indians in Indian Country has been left largely to the Indian groups themselves. In many States, tribes are not adequately organized to perform that function; consequently, there has been created a hiatus in law enforcement authority that could best be remedied

[5] A series of three Supreme Court cases decided by the Marshall Court, called the Marshall Trilogy (between the years 1823 and 1832), formalized this relationship between the U.S. federal government, U.S. states, and tribes. Congress has used the authority from the Marshall Trilogy to justify policy interventions on Native American reservations.

[6] The law technically allowed for concurrent jurisdiction between state courts and tribal courts, but in effect, the introduction of state courts to reservations replaced tribal court activity on PL280 reservations (see Brown, Cookson, and Heimer, 2016a).

> by conferring criminal jurisdiction on the States indicating a willingness to accept such responsibility." (Anderson and Parker, 2016, pg.5)

As an afterthought to extending criminal jurisdiction, state courts were also granted jurisdiction over civil contract enforcement, "because it comported with the pro-assimilationist drift of federal policy and because it was convenient and cheap [to add to the law] (Goldberg-Ambrose, 1997, pg. 50)."

PL280 was mandated in six states: California, Minnesota, Nebraska, Oregon, Wisconsin, and Alaska (upon statehood). In addition, PL280 gave state governments the option to assert PL280 authority after the 1953 law, allowing state courts to hear disputes on reservations within their borders. Between 1953 and 1968, 10 states asserted optional PL280 jurisdiction of one form or another, but most of these opt-in assertions of PL280 jurisdiction were limited in scope – e.g., applying only to pollution laws or jurisdiction over highways (Jimenez and Song, 1998; Getches, Wilkinson, and Williams, 1998; Melton and Gardiner, 2006). Florida and Iowa successfully asserted PL280 jurisdiction over contractual enforcement, and thus, we include reservations in these states in our measure of state courts. Anderson and Parker (2016) note that an important reason more states did not assume state jurisdiction under PL280 is that pre-existing disclaimers in many states' constitutions (established upon statehood) explicitly prohibit jurisdiction in reservation areas. Thus, although court assignment under PL280 was by no means random, the ultimate geographic pattern of PL280 reservations arose in large part from a series of historical accidents.[7]

In all cases where state courts were granted authority on reservations under PL280, the authority was granted to state courts without tribal consent. In 1968, Congress passed the Indian Civil Rights Act, which contained a provision that required states obtain tribal

[7] Both Montana and North Dakota attempted to assert optional PL280 authority, but it did not come into force because it conflicted with their state constitutions. In separate legislation (Public Law 785 in 1950), New York reservations were subjected to the state court system. Because we want our measure to reflect whether state versus tribal courts have jurisdiction, we include New York reservations under our measure of state court jurisdiction, but exclude reservations in Montana and North Dakota. In addition, several reservations were exempted from the original law, or had court authority retroceded to them.

approval before any additional assertions of PL280 authority. As tribes were unwilling to give up sovereign control of their court systems, there were no additional assertions of state court authority after the Indian Civil Rights Act.[8] Consequently, PL280 caused persistent differences in reservation institutions that were not chosen by the tribes themselves.

To maintain the broadest possible sample for our empirical tests, we classify a reservation as under tribal courts if state courts cannot hear civil disputes on the reservation either because the reservation's state never asserted court jurisdiction over native lands, or because PL280 jurisdiction was exempted or retroceded as outlined in the 1953 law or in the 1968 amendments to the law in the Indian Civil Rights Act. Otherwise, a reservation is considered to fall under state court jurisdiction. Although our results are robust to alternative categorizations of the law, our main approach is consistent with other studies that have used variation in PL280 civil jurisdiction to study economic outcomes (Anderson and Parker, 2008; Cookson, 2010; Parker, 2012; Cookson, 2014).

1.2 Financial Development on Reservations Before and After Public Law 280

The historical narrative suggests that assignment to state courts under PL280 was unrelated to a reservation's financial or economic development, and recent evidence suggests that initial conditions on reservations with state and tribal courts were not different in ways that might confound our inferences on PL280's long-run impact. Specifically, Parker (2012) and Brown, Cookson, and Heimer (2016b) show that credit markets, economic development, and demographics were broadly similar across state and tribal court jurisdictions prior to PL280's passage. We summarize this evidence in panel A of Table A.1 in the appendix. Notably, per capita incomes and unemployment rates are almost identical across state and

[8] The 1968 Indian Civil Rights Act also allowed for retrocession of PL280 authority, but the process for retrocession of state court authority to tribal courts is difficult to initiate by tribes. Thus, there were few instances where tribal court authority was regained. We account for retrocession in our main measure, as well as robustness to alternatives in related work (Brown, Cookson, and Heimer, 2016b).

tribal court reservation areas in the years immediately preceding PL280.

Most importantly for our study, local banking markets were also very similar across state and tribal court jurisdictions prior to the 1953 law. Brown, Cookson, and Heimer (2016b, Table 1) use hand-collected data from the 1952 edition of Polk's Bank Directory (Polks) to construct county-level measures of banking activity (bank assets, bank loans, and total number of branches for banks headquartered in the county). According to the Polks data, per capita bank loans were not statistically different under state courts ($201) versus tribal courts ($192). Bank assets per resident were also similar across jurisdiction ($614 in state and $597 in tribal court counties), as were the number of bank branches per capita in 1952 (0.248 per thousand under state versus 0.313 per thousand under tribal court counties). The more aggregate evidence in Parker (2012, Table 2) also supports the conclusion that regions targeted by PL280 did not differ dramatically with respect to initial credit market conditions. Parker (2012) finds that total lending from customary (mostly private) lenders in the 1951-1952 period was actually slightly weaker in Bureau of Indian Affairs (BIA) regions that were predominantly assigned state courts under PL280.

These similar initial conditions contrast the stark differences in local financial development across reservations that emerged in the decades following PL280's passage. As we show in panel B of Table A.1, Brown, Cookson, and Heimer (2016b) find that several key indicators of subsequent banking market development are significantly greater on reservations with state courts, including the propensity for banks to extend credit and the extent of bank branching activity. For example, their estimates suggest state court jurisdiction led to approximately 20 percent more community bank branches per capita. On this basis, our specifications exploit these large differences in financial development, effectively using tribal court status (i.e., unaffected by PL280) as an indication of low financial development.

Importantly, PL280 led to differences in financial development across reservations, while not directly influencing most consumer financial products. PL280 primarily affects contracts related to secured local lending, not the unsecured debt used by most consumers to build a credit history (e.g., student loans and credit cards). Mortgage lending is an important source of secured lending, but mortgage loans to reservations have a 100 percent guarantee provided by the U.S. Department of Housing and Urban Development. Because PL280 does not directly complicate the legal provision of consumer credit, the variation in local credit market activity arising from PL280 allows our analysis to more credibly speak to the causal link between early exposure to local financial institutions and consumer financial health. In addition, the exogenous nature of local financial development under PL280 permits stronger inferences on the causal effects of financial development than is possible in studies that rely on cross-country or cross-state differences in financial markets.

2 Data and Measurement

2.1 Using Census Tract Data to Study Reservation Outcomes

To link reservations to household-level data, we compile a list of reservation area Census tracts from the Tiger/Line American Indian/Alaska Native/Native Hawaiian Census geographic shape files. The FRBNY Consumer Credit Panel (FRBNY - CCP) contains precise detail on the Census tract location of sampled individuals at the time of the credit record. This provides a precise geographic mapping to consumers who reside in reservation areas. Thus, we are confident that our measures of consumer credit activity correspond to consumers who live on reservation lands, and thus, are exposed to precisely the financial environments we discuss in Section 1. As Dimitrova-Grajzl et al. (2014) note when examining the FRBNY - CCP panel, this is an important advance in precision of data, given the data gaps in reservation areas described by Todd (2012).

Building on the sample of large reservations (> 250 residents in 1989) studied in Brown, Cookson, and Heimer (2016b), our sample includes 367 reservation Census tracts, 67 of which have state legal jurisdiction and 300 use tribal courts. These Census tracts are located on a total of 105 Native American reservations. Figure (1) presents the geography of these reservation counties across the U.S. Reservations under PL280 status are noticeably scattered across regions of the United States. Appendix Table A.2 presents the geographic distribution of consumers in our sample.

2.2 Data sources

2.2.1 Household Financial Health

Our main data source is the FRBNY - CCP. This longitudinal data set tracks household liabilities and repayment using a five percent randomized sample of individuals with a social security number and a credit report on file at Equifax.[9] The data start in 1999Q1 and are collected quarterly thereafter (our analysis ends in 2015Q2). The sample design of the Consumer Credit Panel alleviates concern over attrition: the panel re-samples at every quarter to incorporate new credit report holders, and thus, is representative at any quarter. Further, as Brown et al. (2016) illustrate, the FRBNY - CCP offers a comprehensive coverage of U.S. liabilities according to comparisons with other nationally representative surveys such as the the Flow of Funds Accounts and the Survey of Consumer Finances.

The FRBNY - CCP is particularly well-suited to studying household financial activity linked to reservations because of its scope of coverage (approximately one out of every 20 individuals who are 18 years or older is in the data) and the geographic precision assigned to the sampled consumers (Census block level). No other comprehensive data set on households (e.g., the Survey of Consumer Finances or the PSID) has the same geographic precision and coverage. The primary shortcoming of the FRBNY - CCP relative to other household surveys is that – aside from consumer age – there is no demographic information linked to the credit records primarily due to federal laws prohibiting the use of race, sex, or national origin in the decision to extend credit.

To study the effect of financial development on consumer financial health, we focus

[9] Technically, the sample is randomized by using five pairs of arbitrarily selected digits at the end of an individual's social security number.

on the subsample of the FRBNY - CCP records whose first credit report corresponds to a residence on reservation lands, and we focus on young borrowers by retaining only records of individuals who are 18 years or younger at the start of the sample (1999). By focusing on borrowers who start their credit history on the reservation, our tests capture effects on consumer financial health precisely for the individuals who grew up on reservation land, and thus, were exposed to differential levels of financial development.

In addition to the full sample of individuals who grew up on reservations, some of our empirical tests use the following subsamples: (1) the sample of young borrowers (aged ≤ 25), which more directly describes early-life financial health, (2) the sample of relatively older borrowers (aged ≥ 28) who remain on the reservation for the entire sample period, which allows us to estimate the long-run effects of financial development on financial health, and (3) the sample of relatively older borrowers (aged ≥ 28) who moved from the reservation to an off-reservation location, which enables us to evaluate the speed of recovery from moving to an area with stronger financial development. We join other papers, such as Dettling and Hsu (2014) and Dokko, Li, and Hayes (2015), that exploit the longitudinal features of the Consumer Credit Panel by providing separate tests for consumers who stay on reservations for the entire sample, and by studying the dynamics of consumer financial health for those who move away. Aside from speaking to dynamics, studying differences between consumers who stay on reservations and those who move away further helps isolate the impact of different institutional settings experienced during one's formative years on subsequent outcomes. The summary statistics for the full sample and each of the sub-samples are presented in Table 1.

2.2.2 Outcome Variables from the Credit Bureau data

The analysis focuses on several key variables from the FRBNY - CCP, for which summary statistics are presented in Table 1. Our primary measure of consumer financial health is the Equifax riskscore, which varies between 280 and 840 and is similar to a consumer's FICO score. Riskscore is nationally standarized and reflects a history of borrowing and repayment with the intent of measuring the consumer's creditworthiness. Lenders use credit scores like the Equifax riskscore in the decision to extend credit, as well as the interest rates they charge. Thus, a higher riskscore can lead to significant cost savings on loans and increased consumer welfare.

We construct a measure of lending constraints (supply-ratio), which is equal to the number of new credit lines over the number of hard inquiries on the consumer's account. The measure, also used in Bhutta and Keys (2014), is best paired with subprime borrowers (riskscore less than 640), because it captures the segment of applicants for which lending suppliers have greater discretion. Bhutta and Keys (2014) show that the measure varies significantly over time and geographically, and in a manner that appears to reflect the tightening and expansion of credit conditions. The measure's main limitation is that the FRBNY - CCP data does not specify the purpose of the loan for which the hard credit inquiry was obtained. Also, consumers can request a hard credit inquiry without subsequently applying for credit.

Finally, we measure delinquencies by calculating the fraction of credit accounts (tradelines) that are at least 90 days past due. The measure equals the number of credit accounts 90 days past due, 120 days past due or in collections, or severe derogatory, divided by the total number of credit accounts in the current quarter. The variable captures how well borrowers – conditional on obtaining credit – manage their credit.

3 Credit Coverage Across Reservations

3.1 Empty Credit Records

Figure 2 provides initial evidence that there are large differences in the use of consumer credit across state and tribal court jurisdictions. The figure presents estimates of the proportion of individuals without a credit report each year between 2002 and 2014.[10] Estimates of the proportion of individuals with a credit record are equal to $20 \times \frac{\sum_{c=1}^{N} FRBNY - CCP_{c,t}}{\sum_{c=1}^{N} population_c}$, where $\#FRBNY - CCP_{c,t}$ is the number of people in Census tract c in year t in the FRBNY - CCP 5% randomized sample and $population_c$ is the tract's population according to the 2000 U.S. Census.[11] For presentation in the figure, we take the summation in the numerator using all N Census tracts in a tribal or state reservation area.

There are between seven and ten percentage points more individuals with a credit report under state court jurisdiction than under tribal courts. In 2002, around 80 percent of individuals have a credit report under state courts and 72 percent under tribal courts. By 2014, these numbers have grown to 92 percent and 82 percent, respectively. Because the denominator, Census tract population in 2000, is held constant, the growth rates do not account for population growth or the general expansion of consumer credit in the 2000s. Regardless, the *difference* between state and tribal court credit coverage is stable over the sample period.

3.2 Time to Enter the Credit Market

3.2.1 Graphical Evidence

According to Figure 3, it takes longer for individuals to build a credit history under tribal court jurisdiction. The figure plots the proportion of the sample to enter the FRBNY - CCP sample at any given age. A smaller fraction of 18 and 19 year olds receive their first credit report under tribal courts. Roughly 47 (39) percent of consumers who eventually receive a credit report do so by 19 under state (tribal) courts. A larger share of tribal court consumers receive their first credit report by age 20, and the difference persists thereafter. In addition, the differences between young borrowers in tribal court areas versus state court areas are

[10] The figure starts in 2002 because there are potential gaps in FRBNY - CCP coverage in 1999, 2000, and 2001, owing to difficulties accessing historical records at Equifax while designing the data set.

[11] We do not include 2010 Census population, because the FRBNY - CCP is linked to the 2000 Census tracts. Because Census tracts change geography between decennial waves on the Census, updating the population would introduce the possibility of measurement error when mapping tracts to reservation lands.

similar when we study the age at which consumers receive their first line of credit.

3.2.2 Hazard Estimates

To study the effect of financial development on the propensity to enter credit markets, we estimate the following Cox-proportional hazard model:

$$h_i(t) = h_0(t)\, exp\left(\beta_1 tribalcourt_i + X_i^{'}\Gamma\right). \tag{1}$$

The baseline hazard function is given by $h_0(t)$, where the time to enter formal credit markets t is the consumer i's age minus 18. The event of interest in the hazard model is the time at which i receives their first credit report (or in an alternative specification, i's first tradeline). The variable $tribalcourt$ equals one if the consumer resides on a reservation using tribal courts as determined by Public Law 280. The matrix $X_i^{'}$ includes a set of control variables, namely geographic fixed effects. To account for variation over time in the propensity to obtain credit, the baseline hazard function is stratified by calendar date (quarterly).

Table 2 presents estimates of equation 1 using the FRBNY - CCP credit records for consumers whose first credit report is on reservation lands. Panel A presents hazard model specifications for the time until i's first credit report. Column 1a's estimate of β_1 implies an odds-ratio of 0.86 (statistically different from a null effect of 1 at the one percent level). Accordingly, the probability of developing a credit record at age t falls by roughly 14 percent for individuals in tribal court areas. The estimated odds-ratio is similar (0.89) after including fixed effects for the nine Census sampling regions (column 2a). We start with this more aggregated set of geographic controls, because there is not much within state variation in $tribalcourt$ (four states in our sample have both tribal and state court reservation jurisdictions). Regardless, replacing Census region fixed effects with state fixed effects (column 3a) also indicates that consumers in tribal court reservations more slowly develop a credit record (odds-ratio equals 0.84).

Panel B provides evidence that residents of tribal court reservations also take longer to obtain a first credit account. Using equation 1 to estimate the hazard to the consumer's first tradeline, the estimate of β_1 equals -0.219 (*s.e.* = 0.023) with an implied odds-ratio equal to 0.80. The estimated relationship between time to obtain a first credit account and $tribalcourt$ is also negative while holding constant geographic control variables. The implied odds-ratio is 0.80 with Census region effects, which is statistically significant at the one percent level (column 2b). The sign of the estimated effect is the same with state fixed effects, though the implied odds-ratio of 0.90 is not statistically significant (column 3b). Overall, these estimates show the likelihood that an individual in tribal court areas establishes a first credit account at age t is around 10 percent to 20 percent lower than a corresponding individual located on a reservation with state courts.

We provide additional evidence that these differences in inclusion in formal credit markets are caused by differences in local financial development and not another omitted factor. In particular, any exogenous factor that increases the supply of local banking would cut against the differences between tribal and state court institutions. Near the beginning of our sample period, states were gradually relaxing regulations against interstate bank branching in accordance with the Interstate Banking and Branching Efficiency Act of 1994 (IBBEA). IBBEA led to large increases in bank branch density, particularly in low-income and rural areas, but had little effect on economic growth (Celerier and Matray, 2015). Thus, we expect the increase in bank branch density associated with IBBEA to partially offset tribal court's effect on local financial development.

According to regression estimates in Table 3, the lower financial inclusion on reservations with tribal courts is mitigated by bank branching expansion after IBBEA. These specifications estimate a hazard model (as in equation 1) separately for the subsample of borrowers from reservations in IBBEA-deregulated states, and for states that did not deregulate banking and branching under IBBEA.[12] We define a state as having deregulated if it

[12]We present estimates using the full sample and interaction terms in the Appendix, however we prefer these split sample tests because interaction terms estimated in nonlinear models are less straightforward to

adopted any of the four pro-deregulation bank branching policies described by Rice and Strahan (2010). We separately estimate the model on the full sample time period, as well as a restricted sample ending in year 2004 because the last of the state deregulation policies was adopted in 2004. Regardless of the specification or subsample considered, the coefficient estimate on *tribalcourt* is negative and statistically significant at the one percent level. Moreover, based on a comparison of the results from the deregulation sample to the non-deregulation sample, the deregulation-induced expansion of bank branch supply in the surrounding state partially mitigates the influence of local financial development on the reservation. Specifically, the estimated effect of $tribalcourt$ using the deregulated sample is between one-half and three-quarters the magnitude of the effect on the non-deregulated sample. These results suggest that greater access to local financial institutions helps integrate consumers into formal credit markets.

3.3 Evidence of Financial Supply Constraints

A smaller fraction of individuals on tribal court reservations have credit reports than on state court reservations, and those borrowers on tribal court reservations who eventually access credit take longer to develop a credit record. These findings can potentially be explained by consumers finding it difficult to access credit locally, as would be the case given the effects of PL280 on the development of financial institutions across reservations.

We evaluate this hypothesis using the following regression model:

$$supply\,ratio_{it} = \gamma_t + \gamma_r + \beta_1 tribalcourt_i + \beta_2 riskscore_{it} + \beta_3 birthyear_i + \varepsilon_{it} \qquad (2)$$

where date, Census region, and birth year fixed effects are γ_t, γ_r, and $birthyear_i$, respectively. The dependent variable, $supply\,ratio$, is equal to the number of new credit lines divided by the number of hard credit inquiries over the prior 12 months. The coefficient,

interpret.

β_1, thus measures the effect of low financial development on the propensity to receive credit conditional on a hard credit inquiry. Standard errors are clustered by date and consumer i's first Census tract.

The sample used to estimate equation 2 includes consumers under 25 years old and who have a riskscore of 640 or less. Following Bhutta and Keys (2014), we focus on low credit score consumers, because they are the subset of credit applicants for which lenders have a greater degree of discretion in approving loans. Equation 2 also controls for *riskscore* in order to account for consumer creditworthiness at the time of the credit inquiry. Thus, the regression captures differences in how loose lenders are in extending credit to individuals with more credit risk.

Consistent with less available credit supply locally, consumers on tribal court reservations are less likely to see their credit inquiries turn into a line of credit (Table 4). The coefficient estimate on $tribalcourt$ equals -0.084 and is statistically significant at the one percent level when the specification includes date and birth year fixed effects (column 1). The estimated coefficient implies that residents of tribal court reservations are approximately eight percent less likely to receive credit conditional on a credit inquiry. The coefficient estimate is similar with fixed effects for year-of-birth interacted with date (column 2) or Census region fixed effects (column 3). The magnitude of the estimate of β_1 falls slightly to -0.070 when the model includes fixed effects for Census region interacted with date (column 4). The interaction between geography and date accounts for any time-varying differences in economic activity across reservation areas.

Figure 4 shows how credit supply constraints vary over the sample period. The figure presents fitted estimates of equation 2 in which $tribalcourt$ is interacted with a set of yearly indicators. Notably, there is no statistical difference in $supply\,ratio$ across reservation jurisdictions between 2005 and 2010. On the other hand, $supply\,ratio$ is greater for state court reservations during the early 2000s and from 2010 onward, periods associated with a general expansion of credit in the U.S. Thus, the figure not only validates $supply\,ratio$

as a measure of financial constraints, but provides evidence that geographic differences in financial development matter most when credit is more widely available.

4 Growing up without Finance

4.1 Financial Health of Young Borrowers

Figure 5 plots the distribution of credit scores by reservation type across our entire sample. Notably, the tail of good riskscores is larger for state court reservations than for tribal court reservations. Likewise, there is a larger fraction of subprime borrowers (riskscore < 640) under tribal courts. Clearly, exposure to more robust local financial markets is positively associated with better financial health.

Regression analysis confirms the effect of local financial development on consumer financial health. Table 5 presents estimates of the following empirical model,

$$riskscore_{it} = \gamma_t + \gamma_s + \beta_1 tribalcourt_i + \beta_2 birthyear_i + \varepsilon_{it} \tag{3}$$

estimated using the sample of young borrowers (aged 25 and younger in quarter t). We subject the relation between *riskscore* and *tribalcourt* to an increasingly rich set of geographic and time-varying fixed effects. Column 1 includes quarter and birth year fixed effects, while column 2 interacts birth year and quarter fixed effects to allow for time-variation in birth cohort economic outcomes. Column 3 adds Census region fixed effects and column 4 interacts these fixed effects with quarter fixed.

The coefficient estimate for β_1 is approximately -18 riskscore points and statistically significant at the one percent level across all specifications. Eighteen riskscore points is approximately equal to one-fifth of a standard deviation in individual level financial health outcomes, which is large in comparison to other factors shown to affect consumer financial health. For example, studies of the impact of high school programs in economics, math, and finance on consumer financial health, such as Brown et al. (2016), find effects equal to at most 2 riskscore points.

4.2 Evidence from Movement away from Reservation Areas

Next, we study how financial health changes for consumers who move away from reservation areas, which enables us to separate the effect of the institutional environment from other consumer-specific unobservables that influence consumer financial health. To account for the possibility that consumers who leave reservation lands are unobservably different from those who stay, our tests focus on the difference-in-difference effect of consumers who leave tribal court reservations compared to those who stay, evaluated against the corresponding difference between movers and stayers on state court reservations.

Preliminary evidence on the effect of moving away from reservations is presented in Figure 6, which plots the average difference between movers from a reservation against those who stay on reservations, segmented into consumers from tribal and state court jurisdictions. The most striking difference is for *riskscore* and *supply ratio*. Riskscores increase by 18 points for movers from tribal court areas and 9 points for movers from state court reservations. Supply ratio increases by 8 percent for movers from areas with tribal courts, compared to 4 percent for movers from state court reservations. These results provide evidence that moving away from reservations has a greater effect on the financial health for those individuals who grew up on tribal court reservations. Meanwhile, there is not much difference in credit limits or the number of accounts for individuals moving from tribal and state court reservations, suggesting little difference in the demand for credit for borrowers across reservation jurisdiction types.

We test the effects of moving away from reservation areas by estimating the following difference-in-difference regression:

$$Y_{it} = \gamma_t + \gamma_c + \gamma_{st} + \beta_1 offresvn_{it} + \beta_2 offresvn_{it} \times tribalcourt_i + \varepsilon_{it} \tag{4}$$

where Y_{it} measures consumer credit outcomes and $offresvn$ equals one if consumer i is no longer on reservation land in quarter t. Fixed effects for quarter t are γ_t, the Census tract of i's first credit record (birth tract) (γ_c), and i's current state of residence γ_{st}. The coefficient β_1 captures the baseline effect of moving away from reservation lands governed by state courts, whereas β_2 indicates the differential change in credit outcomes for individuals moving away from tribal court reservations. Standard errors are clustered by date and current Census tract.

An advantage of the specification in equation 4 is the richness of the fixed effects, which allows us to account flexibly for unobserved geographical variation in economic activity. For example, the model compares two consumers, one from a tribal court area and one from a state court reservation, both of whom move to the same state. Because the model has state-quarter fixed effects for i's current state, it accounts for any differences in the broader economic activity of the area i moved to. Further, because there are at least two consumers who originate from the same Census tract (some of whom stay on reservations and others that leave), the model is able to establish a baseline effect for the economic conditions when i first establishes his or her credit report. The primary source of variation that remains is the plausibly exogenous difference in financial development across state and tribal court jurisdictions.

Using the specification in equation 4, the primary identification assumption is that consumers who leave tribal court reservations are not systematically better credit risks than consumers who leave state court reservations. The Appendix Table A.6 examines this possibility directly by studying the debt repayment activity of borrowers who move away from reservations. If consumers who move from tribal court reservations exhibit lower delinquency rates after leaving the reservation, they were plausibly better credit risks. We find no evidence that this is the case. Furthermore, the estimates in Appendix Table A.5 show that borrowers from tribal court reservations are less likely to leave the reservation in the first place, despite there being a larger benefit to financial health. These findings are consistent with constraints that disproportionately prevent individuals from moving from tribal court reservations, which would imply that our main estimates understate how much the financial health of the typical resident on a tribal court reservation would improve if otherwise unconstrained from moving.

4.2.1 Changes in Consumer Financial Health

The financial health benefits of moving away from a reservation are stronger for consumers who come from tribal court reservations. Table 6, Panel A, presents estimates of equation 4 using *riskscore* as the dependent variable. The coefficient of interest is β_2, which in this case indicates whether consumer credit scores change more for individuals who move from tribal court reservations compared to individuals who move from state court reservations. Consistent with low financial development stunting credit records of borrowers on tribal court reservations, the estimated coefficient on the interaction term is between 3 and 4 riskscore points and is statistically significant at the one percent level (columns 1 and 2, using date and birth tract fixed effects, and date - birth tract fixed effects, respectively). Our strongest tests include fixed effects for the consumer's birth tract, as well as their state of residence in the current quarter (column 3 and 4).[13] These tests broadly account for the economic conditions of the post-reservation destination. The coefficient estimate is not only robust to their inclusion, the magnitude even increases by about 0.5 riskscore points after including proxies for economic conditions.

Beyond the interpretation on the interactions, the estimate of β_1 shows the effect of moving for individuals who move from state courts. Interestingly, throughout these tests, the estimated coefficient on $offresvn$ is not statistically different from zero. Thus, there is little financial health benefit for those individuals moving away from a state court reservation, after accounting for the fixed effects.

[13]Because the consumers in our sample geographically spread out upon moving from the reservation, state fixed effects are the most granular destination fixed effect we can employ without losing statistical power.

4.2.2 Changes in the Propensity to get a Loan

Consumers who move away from tribal court reservations also become more likely to receive loans. We estimate equation 4 using $supply\,ratio$ as the dependent variable (Table 6, Panel B). Using the same set of fixed effects as Panel A, the difference-in-differences estimate of β_2 is between 6 and 7 percent, and is statistically significant at the one percent level across specifications. The estimate implies that the effect of moving away from tribal court reservations increases the propensity to get a loan by 6 to 7 percent relative to the effect of moving away from state court reservations. Moreover, the overall effect for movers from tribal court areas is positive: they are 2 to 3 percent more likely to see their loan inquires approved after they leave the reservation area.

Interestingly, the main effect on $offresvn$ is negative (around -0.04 to -0.05), implying that consumers who move away from state court reservations are less likely to have their credit inquiries result in new credit lines. There are a few possible explanations for this result. First, under state courts, local institutions are familiar with Native American borrowers, which has over time alleviated any credit frictions. Thus, when a Native American from state court reservations moves away they become exposed to discrimination in lending for the first time. Second, because loan applicants in state court reservations had not previously experienced much difficulty obtaining credit, upon leaving the reservation, applicants brought with them some amount of debt on their balance sheet. Consequently, any subsequent attempts to obtain credit would have been perceived as riskier to a lender.

4.3 Persistent Effects of Growing up Without Finance

4.3.1 Long-Run Effects and Initial Entry into Formal Credit Markets

There are persistent consequences to growing up in areas with lower financial development, and these persistent effects arise from more slowly entering formal credit markets. Table 7 presents OLS estimates of the following regression

$$riskcore_{it} = \gamma_t + \gamma_c + \beta_1 age\,at\,first_i + \beta_2 age\,at\,first_i \times tribalcourt_i + \varepsilon_{it} \qquad (5)$$

using the sample of borrowers born between 1981 and 1987 who are currently at least 28 years old (birth cohorts between 1981 and 1987). We focus on these cohorts in order to allow consumers to accumulate enough financial experience during the sample, allowing us to observe the long-run effects of exposure to differences in financial development. For these tests, we also restrict the analysis to consumers who stay on reservation lands during the entire sample period. In columns 1 through 3, $age\,at\,first$ is i's first credit report. In columns 4 through 6, it is i's first line of credit.

Being older at first credit report (i.e., greater $age\,at\,first_i$) is associated with significantly worse credit scores later in life. For each additional year before first seeking credit, an individual's credit score is between 1.5 and 2 less riskscore points lower (columns 1 through 3). For example, a borrower who received a credit report at 18 would have as much as 10 additional riskscore points than someone receiving their first credit report at 22-years-old (approximately the 75th percentile of ages at first credit report). The interaction between $age\,at\,first$ and $tribalcourt$ is also negative, which suggests the effect is larger for borrowers in areas of low financial development. This result is consistent with there being continued difficulties obtaining credit on tribal court reservations beyond the decision to enter formal credit markets.

The effect of local financial development on consumer financial health ceases to persist after accounting for the age at which the consumer first obtains credit. The coefficient estimate of β_1 is approximately -4.5 riskscore points and is statistically significant at the one percent level in columns 4 through 6. However, the coefficient on the interaction term, β_2, is not statistically different from zero. These results imply that any pair of consumers – one from tribal and the other from state court reservations – who receive their first line of credit at the same age have equally good financial health in subsequent years. In other words, the long-term effects of growing up in low financial development regions are almost entirely captured by the date at which the consumer first obtains credit.

Table 8 provides additional evidence that exposure to local financial markets has an important effect on long-run financial health. Using the set of borrowers who have only been exposed to reservation institutions (those staying on a reservation throughout the sample period), we evaluate long-term effects by estimating the effect of $tribalcourt$ on financial health when consumers are 28 years old and older. The estimates confirm that consumers who grew up on reservations with lower financial development (under tribal courts) have lower consumer riskscores by around seven points, after controlling for Census tract income and employment, as well as Census region fixed effects (column 4a). Two features of Table 8 suggest these differences in later-life financial health are likely not explained by differences in the demand for credit. First, controlling for median tract income and employment rates directly accounts for differences in broader economic opportunities across reservation areas. Second, the results in Panel B show that, unlike the evidence for consumer riskscores, the number of credit inquiries is not significantly different across tribal and state court reservations. These results indicate similar demand for credit across regions.

As an additional piece of evidence on the role of finance, we show in the Appendix that a reservation's level of banking activity exhibits a similar relationship to financial health to what we documented using the $tribalcourt$ dummy variable. Specifically, a standard deviation increase in per capita number of bank branches in the county (Summary of Deposits, FDIC) is associated with an increase of approximately 9 points in consumer riskscores. Moreover, when we include both $tribalcourt$ and bank branching density in the same specification, the coefficient estimate on $tribalcourt$ is no longer statistically different from zero, while bank branch density remains statistically significant at the ten percent level. These findings are consistent with tribal court's effect on financial health working through local financial development.

4.3.2 Quantifying the Long-run Effects

As a final consideration, we examine whether eventual exposure to financial institutions can overcome early-life experiences for consumers who grew up in areas with low financial development. The exercise is useful because it helps determine the potential effectiveness of policies that extend credit to less developed areas. To test the persistence of growing up without finance, we estimate the following regression

$$riskscore_{it} = \gamma_t + \beta_1 quarters\,away_{it} + \beta_2 birthyear_i + \varepsilon_{it} \tag{6}$$

for the sample of consumers who move away from reservations, separately by jurisdiction type.

Exposure to areas with greater financial development partially offsets the effect of early exposure to areas with less financial development, but the effect takes a long time to overcome. Figure 7 presents fitted estimates of equation 6. The slope coefficient β_1 is steeper for consumers from tribal court reservations, but these consumers have worse financial health when they leave the reservation (riskscore equal to 634 versus 646 when $quarters\,away_{it} = 0$ for tribal and state court, respectively). It takes approximately 68 quarters, or 17 years, for the average financial health of tribal court and state court reservation movers to no longer be statistically different from each other. These results are a strong indication that early experiences with financial markets are a critical determinant of consumer financial health that is not easily transformed by later experiences.

5 Conclusion

This paper shows that financial market development has a large, persistent effect on consumer financial health. Our approach marries location-specific micro-level data on consumer financial health with exogenous variation in local financial development on Native American reservations arising from U.S. Congressional action in the early 1950s. We find that individuals growing up in areas with relatively strong financial markets establish a credit history sooner, have higher credit ratings, and are more successful obtaining credit. Moreover, although individuals who leave areas with weak financial markets see significant improvements in consumer financial health, it takes many years to overcome the negative effects of growing up without finance.

These findings provide new insights on the consumer-side effects of financial development, and in particular, highlight unappreciated consequences of local financial market development for household well-being over the long run. In this way, our work not only speaks to the long-term benefits of financial inclusion, but also suggests that traditional banking institutions matter through an underappreciated channel – early-life engagement with financial markets. This insight is important to consider as traditional local financial institutions continue to consolidate and move services online.[14] Although financial institutions appear to be ubiquitous, there remain important gaps in local financial development beyond Native American reservations (see, e.g., McDevitt and Sojourner, 2016's example in the Bronx). By showing that these gaps have economically-large effects on long-term household financial health, our findings suggest that much more work is needed to understand how these gaps form in the first place, and to study effective policies to remedy them.

[14]For example, see "For the First Time, More Are Mobile-Banking Than Going to a Branch", Telis Demos, *Wall Street Journal*, Jan 12, 2016.

References

Agarwal, S., S. Chomsisengphet, N. Mahoney, and J. Stroebel. 2015. Regulating consumer financial products: Evidence from credit cards. *The Quarterly Journal of Economics* 130:111–64.

Akkus, O., J. A. Cookson, and A. Hortacsu. 2015. The Determinants of Bank Mergers: A Revealed Preference Analysis. *Management Science* Forthcoming.

Allen, F., A. Demirguc-Kunt, L. Klapper, and M. S. M. Peria. 2016. The foundations of financial inclusion: Understanding ownership and use of formal accounts. *Journal of Financial Intermediation* Forthcoming.

Anagol, S., V. Balasubramaniam, and T. Ramadorai. 2015. The Effects of Experience on Investor Behavior: Evidence from India's IPO Lotteries. *Working Paper, SSRN 2568758* .

Anderson, T. L., and D. Leuck. 1992. Land tenure and agricultural productivity on Indian reservations. *Journal of Law and Economics* 35:427–54.

Anderson, T. L., and D. P. Parker. 2008. Sovereignty, credible commitments, and the prosperity of American Indian reservations. *Journal of Law and Economics* 51:641–66.

———. 2016. Lessons in Fiscal Federalism from American Indian Nations. *Handbook on Law and Economics, Forthcoming* .

Barro, R. J., and X. Sala-i Martin. 1992. Convergence. *The Journal of Political Economy* 100:pp. 223–251. ISSN 00223808.

Beck, T., A. Demirguc-Kunt, and M. Peria. 2007. Reaching out: Access to and use of banking services across countries. *Journal of Financial Economics* 85:234–66.

Berger, E. A., A. W. Butler, E. Hu, and M. Zekhnini. 2015. Credit Be Damned: The Impact of Banking Deregulation on Economic Growth. *Working Paper* .

Berkowitz, D., C. Lin, and Y. Ma. 2014. Do Property Rights Matter? Evidence from a Property Law Enactment. *Journal of Financial Economics* Forthcoming.

Bernile, G., V. Bhagwat, and R. Rau. 2015. What Doesn't Kill You Only Makes You More Risk-Loving: Early Disasters and CEO Behavior. *Journal of Finance* .

Bhutta, N., and B. J. Keys. 2014. Interest Rates and Equity Extraction during the Housing Boom. Working Paper, University of Chicago Law School.

Black, S. E., P. J. Devereux, P. Lundborg, and K. Majlesi. 2015. On the Origins of Risk-taking in Financial Markets. *NBER Working Papers No. 21332* .

Brown, J. R., J. A. Cookson, and R. Heimer. 2016a. Courting Economic Development. *World Bank Economic Review* Forthcoming.

———. 2016b. Law and Finance Matter: Lessons from Externally Imposed Courts. *Review of Financial Studies* forthcoming.

Brown, M., J. Grigsby, W. van der Klaauw, J. Wen, and B. Zafar. 2016. Financial Education and the Debt Behavior of the Young. *Review of Financial Studies* Forthcoming.

Butler, A. W., J. Cornaggia, and U. Gurun. 2015. Do Local Capital Market Conditions Affect Consumers' Borrowing Decisions? *Management Science, Forthcoming* .

Campbell, J. R., and Z. Hercowitz. 2009. Welfare Implications of the Transition to High Household Debt. *Journal of Monetary Economics* 56:1–16.

Celerier, C., and A. Matray. 2015. Unbanked households: Evidence of supply-side factors. *working paper* .

Chiang, Y.-M., D. Hirshleifer, Y. Qian, and A. E. Sherman. 2011. Do Investors Learn from Experience? Evidence from Frequent IPO Investors. *Review of Economic Studies* 24:1560–89.

Cole, S., A. L. Paulson, and G. K. Shastry. 2014. Smart Money? The Effect of Education on Financial Outcomes. *Review of Financial Studies* 27:2022–51.

Cookson, J. A. 2010. Institutions and casinos: An empirical investigation of the location of indian casinos. *Journal of Law and Economics* 53:651–87.

———. 2014. Economic Consequences of Judicial Institutions: Evidence from a Natural Experiment. *Working Paper* Available on SSRN.

Corradin, S., and A. Popov. 2015. House Prices, Home Equity Borrowing, and Entrepreneurship. *Review of Financial Studies* 28:2399–428.

Cortes, K. R. 2014. Rebuilding After Disaster Strikes: How Local Lenders Aid in the Recovery. *Working Paper* .

Cronqvist, H., and S. Siegel. 2015. The origins of savings behavior. *Journal of Political Economy* 123:123 – 169.

Dettling, L. J., and J. W. Hsu. 2014. Returning to the Nest: Debt and Parental Co-residence Among Young Adults. Working Paper, FEDS Working Paper.

Dimitrova-Grajzl, V., P. Grajzl, A. J. Guse, and R. M. Todd. 2014. Consumer Credit on American Indian Reservations. *Working Paper* Available on SSRN: 2408747.

Dimmock, S. G., R. Kouwenberg, O. S. Mitchell, and K. Peijnenburg. 2016. Ambiguity aversion and household portfolio choice puzzles: Empirical evidence. *Journal of Financial Economics* 119:559 – 577.

Dippel, C. 2014. Forced Coexistence and Economic Development: Evidence from American Indian Reservations. *Econometrica* 82:2131–65.

Dittmar, A. K., and R. Duchin. 2015. Looking in the Rear View Mirror: The Effect of Managers' Professional Experience on Corporate Financial Policy. *Review of Economic Studies* Forthcoming.

Dokko, J., G. Li, and J. Hayes. 2015. Credit scores and committed relationships. Finance and Economics Discussion Series 2015-81, Board of Governors of the Federal Reserve System (U.S.).

Fuchs-Schudeln, N., and M. Schundeln. 2015. On the endogeneity of political preferences: Evidence from individual experience with democracy. *Science* 347:1145–8.

Getches, D. H., C. F. Wilkinson, and J. Williams, Robert A. 1998. *Cases and materials on Federal Indian Law*. Fourth ed. St. Paul, MN: West Group Publishing.

Giannetti, M., and T. Y. Wang. 2016. Corporate scandals and household stock market participation. *The Journal of Finance* Forthcoming.

Giuliano, P., and A. Spilimbergo. 2014. Growing Up in a Recession. *The Review of Economic Studies* 81:787–817.

Goldberg-Ambrose, C. 1997. *Planting tail feathers: Tribal survival and Public Law 280*. Los Angeles, CA: University of California.

Greenwood, R., and S. Nagel. 2009. Inexperienced Investors and Bubbles. *Journal of Financial Economics* 93:239–58.

Grinblatt, M., M. Keloharju, and J. T. Linnainmaa. 2012. Iq, trading behavior, and performance. *Journal of Financial Economics* 104:339 – 362.

Guiso, L., P. Sapienza, and L. Zingales. 2004. The Role of Social Capital in Financial Development. *American Economic Review* 94:526–56.

Gurun, U. G., N. Stoffman, and S. E. Yonker. 2015. Trust busting: The effect of fraud on investor behavior. *Working paper* .

Hakenes, H., I. Hasan, P. Molyneux, and R. Xie. 2015. Small Banks and Local Economic Development. *Review of Finance* 19:653–83.

Iacoviello, M., and M. Pavan. 2013. Housing and Debt Over the Life cycle and Over the Business Cycle. *Journal of Monetary Economics* 60:221–38.

Javaratne, J., and P. E. Strahan. 1996. The Finance-Growth Nexus: Evidence from Bank Branch Deregulation. *The Quarterly Journal of Economics* 119:929–69.

Jimenez, V., and S. C. Song. 1998. Concurrent tribal and state jurisdiction under Public Law 280. *American University Law Review* 47:1627–707.

Karlan, D., and J. Zinman. 2010. Expanding credit access: Using randomized supply decisions to estimate the impacts. *Review of Financial Studies* 23:433–64.

Karpoff, J. M., and E. M. Rice. 1989. Organizational form, share transferability, and firm performance: Evidence from the ANCSA corporations. *Journal of Financial Economics* 24:69–105.

Keys, B. J., and J. Wang. 2015. Minimum Payments and Debt Paydown in Consumer Credit Cards. *Working Paper* .

King, R. G., and R. Levine. 1993. Finance and Growth: Schumpeter Might Be Right. *Quarterly Journal of Economics* 108:717–37.

Knüpfer, S., E. H. Rantapuska, and M. Sarvimäki. 2016. Formative experiences and portfolio choice: Evidence from the Finnish great depression. *Journal of Finance* forthcoming.

Krishnan, K., D. Nandy, and M. Puri. 2014. Does Financing Spur Small Business Productivity? Evidence from a Natural Experiment. *Review of Financial Studies* Forthcoming.

Kuhnen, C. M., and A. C. Miu. 2016. Socioeconomic status and learning from financial information. *Journal of Financial Economics* Forthcoming.

Levine, R. 2005. Finance and Growth: Theory and Evidence. In P. Aghion and S. Durlauf, eds., *Handbook of Economic Growth*, vol. 1 of *Handbook of Economic Growth*, chap. 12, 865–934. Elsevier.

Levine, R., N. Loayaza, and T. Beck. 2000. Financial Intermediation and Growth: Causality and Causes. *Journal of Monetary Economics* 46:31–77.

Lusardi, A., and O. S. Mitchell. 2011. Financial literacy around the world: An overview. *Journal of Pension Economics and Finance* 10:497–508. ISSN 1475-3022.

Malmendier, U., and S. Nagel. 2011. Depression Babies: Do Macroeconomic Experiences Affect Risk Taking? *The Quarterly Journal of Economics* 126:373–416.

Malmendier, U., G. Tate, and J. Yan. 2011. Overconfidence and Early-Life Experiences: The Effect of Managerial Traits on Corporate Financial Policies. *The Journal of Finance* 66:1687–733.

McDevitt, R. C., and A. Sojourner. 2016. Demand, Regulation, and Welfare on the Margin of Alternative Financial Services. *Working Paper* .

Melton, A. P., and J. Gardiner. 2006. Public Law 280: Issues and concerns for victims of crime in Indian Country. (last updated 24 September 2009).

Melzer, B. T. 2011. The real costs of credit access: Evidence from the payday lending market*. *The Quarterly Journal of Economics* 126:517–55.

Mian, A., and A. Sufi. 2011. House Prices, Home Equity-Based Borrowing, and the US Household Leverage Crisis. *The American Economic Review* 101:2132–56.

Morse, A. 2011. Payday lenders: Heroes or villains? *Journal of Financial Economics* 102:28–44.

Osili, U. O., and A. L. Paulson. 2008. Institutions and Financial Development: Evidence from International Migrants in the United States. *The Review of Economics and Statistics* 90:498–517.

Parker, D. P. 2012. The effects of legal institutions on access to credit: Evidence from american indian reservations. Working Paper.

Rice, T., and P. E. Strahan. 2010. Does credit competition affect small-firm finance? *Journal of Finance* 65:861–89.

Stango, V., and J. Zinman. 2011. Fuzzy math, disclosure regulation, and market outcomes: Evidence from truth-in-lending reform. *Review of Financial Studies* 24:506–34.

Strahan, P. E., and T. Rice. 2010. Does Credit Competition Affect Small Firm Finance? *Journal of Finance* 65.

Todd, R. M. 2012. Indian country economic development: Data and data gaps. In *Conference on Law and Economics of Indian Country Economic Development*.

Table 1: **Summary Statistics for Regression Analysis**

Note: This table presents summary statistics of data from FRBNY - CCP, a 5% random panel of consumer credit reports from Equifax. The sample includes credit records sampled quarterly between 1999Q1 and 2015Q2 for consumers who were 18 or younger in 1999 and whose first credit report was on reservation lands as defined by the Bureau of Indian Affairs. The variable $tribalcourt$ equals one if the consumer resides on a reservation using tribal courts as determined by Public Law 280. The variable $offresvn$ equials one if the observation comes from a quarter in which the consumer resides off reservation lands. Each observation is at the consumer-quarter level.

	observations	mean	median	std dev	10^{th} percentile	90^{th} percentile
Sample: all consumer - quarter observations						
Equifax riskscore	350,798	635.7	645	93.1	512	754
supply ratio (# new acct / # inquiries) | riskscore < 640	120,895	0.47	0.2	0.76	0	1
# credit inquiries during past 12mo	278,047	2.35	2	2.66	0	5
fraction delinquent (# > 90 days past due / # acct)	285,925	0.14	0	0.33	0	1
tribalcourt (= 1)	350,798	0.77				
off resvn (= 1)	350,798	0.51				
Sample: 18 - 25 years old, on reservation						
Equifax riskscore	67,159	622.3	640	83.2	511	719
supply ratio (# new acct / # inquiries) | riskscore < 640	21,838	0.49	0.25	0.75	0	1
# credit inquiries during past 12mo	46,499	2.08	1	2.40	0	5
fraction delinquent (# > 90 days past due / # acct)	48,497	0.16	0	0.36	0	1
tribalcourt (= 1)	67,159	0.79				
Sample: $\geq$ 28-years-old, on resvn. entire sample						
Equifax riskscore	12,285	624.6	614	89.8	517	753
supply ratio (# new acct / # inquiries) | riskscore < 640	3,889	0.35	0	0.71	0	1
# credit inquiries during past 12mo	8,401	1.77	1	2.14	0	4
fraction delinquent (# > 90 days past due / # acct)	8,454	0.27	0	0.43	0	1
tribalcourt (= 1)	12,285	0.83				
Sample: $\geq$ 28-years-old, moved from reservation						
Equifax riskscore	36,028	653.2	657	100.7	517	780
supply ratio (# new acct / # inquiries) | riskscore < 640	10,834	0.45	0.15	0.76	0	1
# credit inquiries during past 12mo	29,322	2.13	1	2.40	0	5
fraction delinquent (# > 90 days past due / # acct)	31,803	0.14	0	0.32	0	0.95
tribalcourt (= 1)	36,028	0.75				

Table 2: **How Long Does it Take to Enter Credit Markets?**

Note: This table presents estimation results of the following Cox-proportional hazard model

$$h_i(t) = h_0(t)\, exp\left(\beta_1 tribalcourt_i + X_i^{'}\Gamma\right)$$

using data from FRBNY - CCP, a 5% random panel of consumer credit reports from Equifax. The sample includes credit records sampled quarterly between 1999Q1 and 2015Q2 for borrowers whose first credit report is associated with a Census tract on reservation lands as defined by the Bureau of Indian Affairs. The baseline hazard function is given by $h_0(t)$, where t is the consumer's age. The variable $tribalcourt$ equals one if the consumer resides on a reservation using tribal courts as determined by Public Law 280. The hazard functions are stratified by date (quarterly). Standard errors clustered by date are in parentheses. *, **, and *** indicate statistical significance at the one, five, and ten percent levels.

Panel A: *time to first credit report*

	(1a)		(2a)		(3a)	
$t = age - 18$	coef	[*odds-ratio*]	coef	[*odds-ratio*]	coef	[*odds-ratio*]
tribalcourt	-0.157***	[*0.855*]	-0.116***	[*0.890*]	-0.176***	[*0.839*]
	(0.023)		(0.023)		(0.048)	
date quarter strata	x		x		x	
Census region FE			x			
state FE					x	
N (consumer-quarter)	151,394		151,394		151,394	
N (consumers)	14,380		14,380		14,380	

Panel B: *time to first tradeline*

	(1b)		(2b)		(3b)	
$t = age - 18$	coef	[*odds-ratio*]	coef	[*odds-ratio*]	coef	[*odds-ratio*]
tribalcourt	-0.219***	[*0.803*]	-0.227***	[*0.797*]	-0.101	[*0.904*]
	(0.023)		(0.022)		(0.069)	
date quarter strata	x		x		x	
Census region FE			x			
state FE					x	
N (consumer-quarter)	246,735		246,735		246,735	
N (consumers)	14,380		14,380		14,380	

Table 3: **Credit Market Entry and Bank Branching Expansion**

Note: This table presents estimation results of the following Cox-proportional hazard model

$$h_i(t) = h_0(t)\, exp\left(\beta_1 tribalcourt_i + X_i' \Gamma\right)$$

using data from FRBNY - CCP, a 5% random panel of consumer credit reports from Equifax. The sample includes credit records sampled quarterly between 1999Q1 and 2015Q2 for borrowers whose first credit report is associated with a Census tract on reservation lands as defined by the Bureau of Indian Affairs. The baseline hazard function is given by $h_0(t)$, where t is the consumer's age. The variable $tribalcourt$ equals one if the consumer resides on a reservation using tribal courts as determined by Public Law 280. The data is sorted by the state's status of deregulation under the Interstate Banking and Branching Efficiency Act of 1994. We call the state deregulated if the state has adopted any of the four bank branching measures described in Rice and Strahan (2010). The hazard functions are stratified by date (quarterly). Standard errors clustered by date are in parentheses. *, **, and *** indicate statistical significance at the one, five, and ten percent levels.

Panel A: *time to first report*

sample period:	years ≤ 2004				full sample			
IBBEA status:	not deregulated		deregulated		not deregulated		deregulated	
	(1a)		(2a)		(3a)		(4a)	
$t = age - 18$	coef	[*odds-ratio*]	coef	[*odds-ratio*]	coef	[*odds-ratio*]	coef	[*odds-ratio*]
tribalcourt	-0.283***	[*0.754*]	-0.159***	[*0.853*]	-0.217***	[*0.805*]	-0.153***	[*0.858*]
	(0.086)		(0.050)		(0.041)		(0.026)	
date quarter strata	x		x		x		x	
N (consumer-quarter)	4,913		41,840		15,267		119,870	
N (consumers)	662		5,556		1,511		11,555	

Panel B: *time to first tradeline*

sample period:	years ≤ 2004				full sample			
IBBEA status:	not deregulated		deregulated		not deregulated		deregulated	
	(1b)		(2b)		(3b)		(4b)	
$t = age - 18$	coef	[*odds-ratio*]	coef	[*odds-ratio*]	coef	[*odds-ratio*]	coef	[*odds-ratio*]
tribalcourt	-0.333***	[*0.716*]	-0.183***	[*0.833*]	-0.370***	[0.691]	-0.148***	[*0.862*]
	(0.083)		(0.048)		(0.059)		(0.025)	
date quarter strata	x		x		x		x	
N (consumer-quarter)	5,872		53,414		22,797		194,521	
N (consumers)	662		5,556		1,511		11,555	

Table 4: **The Propensity for Young Subprime Borrowers to Get a Loan**

Note: This table presents OLS estimation results of the following specification

$$supply\,ratio_{it} \quad = \quad \gamma_t + \gamma_r + \beta_1 tribalcourt_i + \beta_2 riskscore_{it} + \beta_3 birthyear_i + \varepsilon_{it}$$

using data from FRBNY - CCP, a 5% random panel of consumer credit reports from Equifax. The sample includes credit records sampled quarterly between 1999Q1 and 2015Q2 for borrowers 25 years old or younger with a riskscore less than 640 (subprime borrower). The sample is confined to consumers who only appear on reservation lands in the data at all points in the FRBNY - CCP sample. The variable *supply ratio* is the number of new credit lines over the number of hard credit inquiries (last 12 months), while *tribalcourt* equals one if the consumer resides on a reservation using tribal courts as determined by Public Law 280. Fixed effects for date (quarterly) and i's current Census region are γ_t and γ_r, respectively. Standard errors are clustered by current Census tract and date. Stars *, **, and *** indicate statistical significance at the one, five, and ten percent levels.

	dep var = riskscore *sample*: consumers less than 25 years old, on a reservation, borrower riskscore < 640			
	(1)	(2)	(3)	(4)
tribalcourt	-0.0836***	-0.0802***	-0.0844***	-0.0697***
	(0.015)	(0.015)	(0.018)	(0.018)
riskscore	x	x	x	x
date quarter FE	x		x	
birth year FE	x		x	x
birth year – date quarter FE		x		
Census region FE			x	
Census region – date quarter FE				x
N	21,726	21,726	21,726	21,726
R^2	0.040	0.060	0.059	0.085

Table 5: **The Financial Health of Young Borrowers on Reservations**

Note: This table presents OLS estimation results of the following specification

$$riskscore_{it} = \gamma_t + \gamma_s + \beta_1 tribalcourt_i + \beta_2 birthyear_i + \varepsilon_{it}$$

using data from FRBNY - CCP, a 5% random panel of consumer credit reports from Equifax. The sample includes credit records sampled quarterly between 1999Q1 and 2015Q2 for borrowers 25 years old or younger. The sample is confined to consumers who only appear on reservation lands in the data at all points in the FRBNY - CCP sample. The dependent variable *riskscore* is similar to a consumer's FICO score, it varies between 280 and 840, and offers an assessment of consumer *i*'s credit-worthiness, while *tribalcourt* equals one if the consumer resides on a reservation using tribal courts as determined by Public Law 280. Fixed effects for date (quarterly) and *i*'s current state are γ_t and γ_s, respectively. Standard errors are clustered by current Census tract and date. Stars *, **, and *** indicate statistical significance at the one, five, and ten percent levels.

	dep var = riskscore			
	sample: consumers less than 25 years old, on a reservation			
	(1)	(2)	(3)	(4)
tribalcourt	-18.60***	-18.53***	-18.16***	-17.81***
	(0.99)	(1.00)	(1.01)	(1.00)
date quarter FE	x		x	
birth year FE	x		x	x
birth year - date quarter FE		x		
Census region FE			x	
Census region - date quarter FE				x
N	66,027	66,027	66,027	66,027
R^2	0.037	0.041	0.051	0.061

Table 6: **Moving Away From Reservations and Consumer Creditworthiness**

Note: This table presents OLS estimation results of the following specification

$$Y_{it} = \gamma_t + \gamma_c + \beta_1 offresvn_{it} + \beta_2 offresvn_{it} \times tribalcourt_i + \varepsilon_{it}$$

using data from FRBNY - CCP, a 5% random panel of consumer credit reports from Equifax. The sample includes credit records sampled quarterly (t) between 1999Q1 and 2015Q2 for consumers who would have turned 18 in 1999 or younger and whose first credit report was on reservation lands as defined by the Bureau of Indian Affairs. The dependent variable *riskscore* is similar to a consumer's FICO score, it varies between 280 and 840, and offers an assessment of consumer i's credit-worthiness. The variable *supply ratio* is the number of new credit lines over the number of hard credit inquiries (last 12 months). $tribalcourt$ equals one if the consumer's first credit report is on a reservation using tribal courts as determined by Public Law 280. $offresvn$ equals one when i's location is not on reservation lands. Fixed effects for date (quarterly) and i's first Census tract are γ_t and γ_c, respectively. Standard errors are clustered by current Census tract and date. Stars *, **, and *** indicate statistical significance at the one, five, and ten percent levels.

Panel A:	*dep var* = riskscore, *sample*: all observations			
	(1a)	(2a)	(3a)	(4a)
tribalcourt × off resvn	3.949***	3.413***	4.561***	3.891***
	(0.53)	(0.59)	(0.55)	(0.59)
off resvn	0.0874	0.885	-1.190	-0.307
	(0.90)	(0.89)	(0.88)	(0.85)
date quarter FE	x		x	
birth Census tract FE	x		x	
birth Census tract – date quarter FE		x		x
current state FE			x	x
N	350,798	348,784	350,797	348,783
R^2	0.12	0.097	0.13	0.10

Panel B:	*dep var* = supply ratio, *sample*: borrower riskscore < 640			
	(1b)	(2b)	(3b)	(4b)
tribalcourt × off resvn	0.0665***	0.700***	0.0653***	0.0679***
	(0.011)	(0.012)	(0.011)	(0.012)
off resvn	-0.0512***	-0.0492***	-0.0457***	-0.0428***
	(0.0094)	(0.010)	(0.0098)	(0.011)
riskscore	x	x	x	x
date quarter FE	x		x	
birth Census tract FE	x		x	
birth Census tract – date quarter FE		x		x
current state FE			x	x
N	120,894	117,549	120,891	117,546
R^2	0.063	0.18	0.068	0.18

Table 7: **The Persistent Effect of Lack of Access to Credit - Financial Health**

Note: This table presents estimates of the following regression estimated using OLS

$$riskcore_{it} = \gamma_t + \gamma_c + \beta_1 age\,at\,first_i + \beta_2 age\,at\,first_i \times tribalcourt_i + \varepsilon_{it}.$$

The sample includes consumers i who are only observed on a reservation Census tract. The sample includes consumers born between 1981 and 1987, inclusive. The observations are credit records occurring after the consumer is at least 28 years old. The dependent variable *riskscore* is similar to a consumer's FICO score, it varies between 280 and 840, and offers an assessment of the i's credit-worthiness. The variable *tribalcourt* equals one if the consumer resides on a reservation using tribal courts as determined by Public Law 280. "Age at first credit report" is the consumer's age when they first enter the FRBNY-CCP sample, while "age at first trade line" is the consumer's age when they receive their first credit account. Fixed effects for date (quarterly) and Census tract for i's first credit report are γ_t and γ_c, respectively. Standard errors are clustered by date and current Census tract. The stars *, **, and *** indicate statistical significance at the one, five, and ten percent levels.

	dep var = riskscore					
	sample: consumers at least 28 years old, on reservation entire sample					
	(1)	(2)	(3)	(4)	(5)	(6)
age at first credit report	-1.968***	-1.508**	-1.727***			
	(0.37)	(0.59)	(0.57)			
tribalcourt × age at first credit report	-1.710***	-1.200	-1.920**			
	(0.48)	(0.74)	(0.73)			
age at first trade line				-4.415***	-4.389***	-4.794***
				(0.45)	(0.65)	(0.59)
tribalcourt × age at first trade line				0.559	0.497	0.0789
				(0.61)	(0.69)	(0.65)
date quarter FE	x			x		
birth Census tract FE	x			x		
birth Census tract – date quarter FE		x	x		x	x
birth year FE			x			x
N	12,228	10,194	10,194	11,931	9,833	9,833
R^2	0.32	0.45	0.45	0.33	0.46	0.47

Table 8: **The Demand for Consumer Credit**

Note: This table presents OLS estimation results of the following specification

$$Y_{it} = \gamma_t + \gamma_s + \beta_1 tribalcourt_i + \beta_2 bank\,branches_i + \beta_3 birthyear_i + \varepsilon_{it}$$

using data from FRBNY - CCP, a 5% random panel of consumer credit reports from Equifax. The sample includes credit records sampled quarterly between 1999Q1 and 2015Q2 for borrowers 25 years old or younger. The sample is confined to consumers who only appear on reservation lands in the data at all points in the FRBNY - CCP sample. In Panel A, the dependent variable *riskscore* is similar to a consumer's FICO score, it varies between 280 and 840, and offers an assessment of consumer *i*'s credit-worthiness. In Panel B, the dependent variable is the number of hard credit inquiries made in the past twelve months. The independent variable *tribalcourt* equals one if the consumer resides on a reservation using tribal courts as determined by Public Law 280. . Median Census tract income and employment rates come from the 2000 U.S. Census. Fixed effects for date (quarterly) and *i*'s current state are γ_t and γ_s, respectively. Standard errors are clustered by current Census tract and date. Stars *, **, and *** indicate statistical significance at the one, five, and ten percent levels.

Panel A:	*dep var* = riskscore			
	sample: consumers at least 28 years old, on reservation entire sample			
	(1a)	(2a)	(3a)	(4a)
tribalcourt	-14.56***	-9.687***	-4.550*	-7.601***
	(2.85)	(2.76)	(2.72)	(2.89)
tract employment rate (Z)		14.00***	5.049***	5.283***
		(0.90)	(1.24)	(1.33)
median tract income (Z)			18.32***	17.07***
			(1.64)	(1.77)
birth year FE	x	x	x	x
date quarter FE	x	x	x	x
Census region FE				x
N	12,285	12,285	12,285	12,273
R^2	0.017	0.036	0.049	0.066

Panel B:	*dep var* = # credit inquiries during past 12mo			
	sample: consumers at least 28 years old, on reservation entire sample			
	(1b)	(2b)	(3b)	(4b)
tribalcourt	0.00610	-0.0266	-0.0553	0.0259
	(0.043)	(0.045)	(0.045)	(0.048)
tract employment rate (Z)		-0.0914***	-0.0352*	-0.0255
		(0.016)	(0.019)	(0.018)
median tract income (Z)			-0.111***	-0.126***
			(0.023)	(0.026)
birth year FE	x	x	x	x
date quarter FE	x	x	x	x
Census region FE				x
N	12,285	12,285	12,285	12,273
R^2	0.0028	0.0048	0.0059	0.036

Figure 1: **Reservation Counties Across the United States**

Note: This figure illustrates U.S. counties that contain a headquarters to a Native American reservation. State court reservations are reservations for which civil contracts are adjudicated in the state's court system, as prescribed according to Congressional legislation titled Public Law 280. When state court equals zero, the tribe's court system adjudicates and enforces civil contracts.

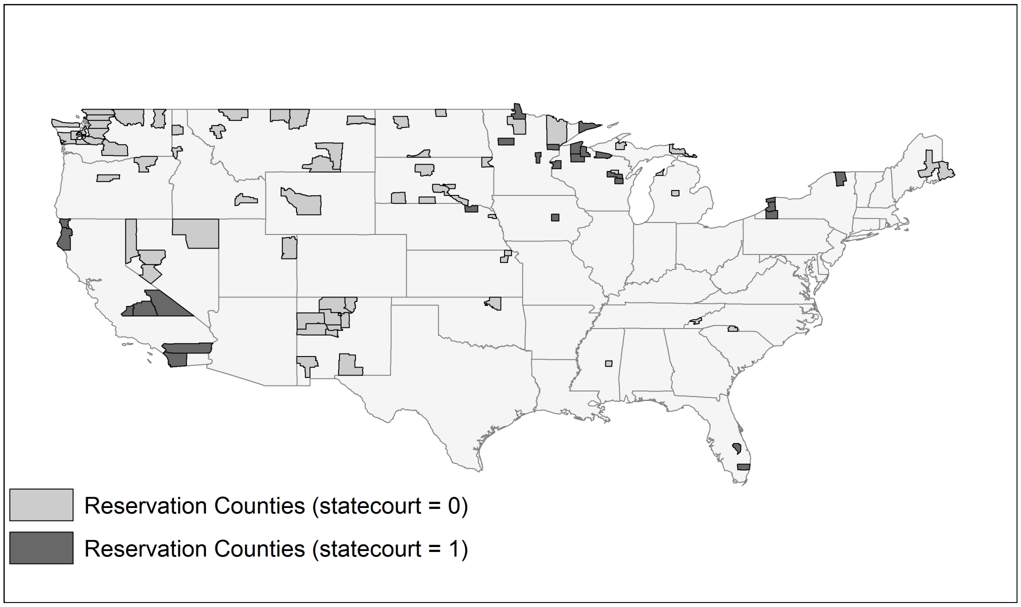


Figure 2: **Credit Undercoverage Across Reservations**

Note: This figure demonstrates the extent of credit undercoverage on reservations. The proportion of coverage is equal to $20 \times \frac{\sum_{c=1}^{N} FRBNY-CCP_{c,t}}{\sum_{c=1}^{N} population_c}$, where $\#FRBNY-CCP_{c,t}$ is the number of people in a Census tract c in year t in the FRBNY-CCP 5% randomized sample and $population_c$ is the population in c according to the 2000 U.S. Census.

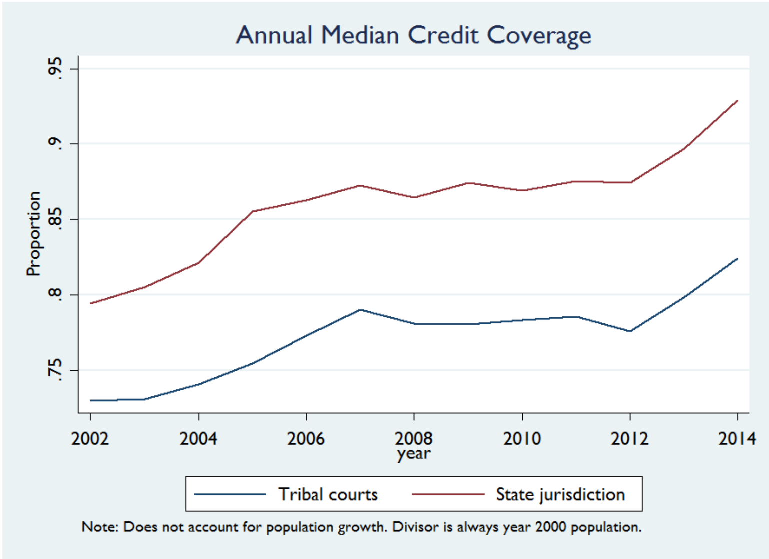


Figure 3: **Delayed Access to Credit**

Note: This figure uses data from FRBNY - CCP, a 5% random panel of consumer credit reports from Equifax. The sample includes credit records sampled quarterly between 1999Q1 and 2015Q2 for borrowers who were 18 years old or younger in 1999 and whose first credit report is associated with an address on Native American reservation lands as defined by the Bureau of Indian Affairs. State jurisdiction reservations are reservations for which civil contracts are adjudicated in the state's court system, as prescribed according to Congressional legislation titled Public Law 280. In tribal court reservations, the tribe's court system adjudicates and enforces civil contracts. Age at start of the sample is the age in which consumer *i* first appears with a riskscore in the FRBNY - CCP sample. Age at first tradeline is the age in which *i* receives their first line of credit.

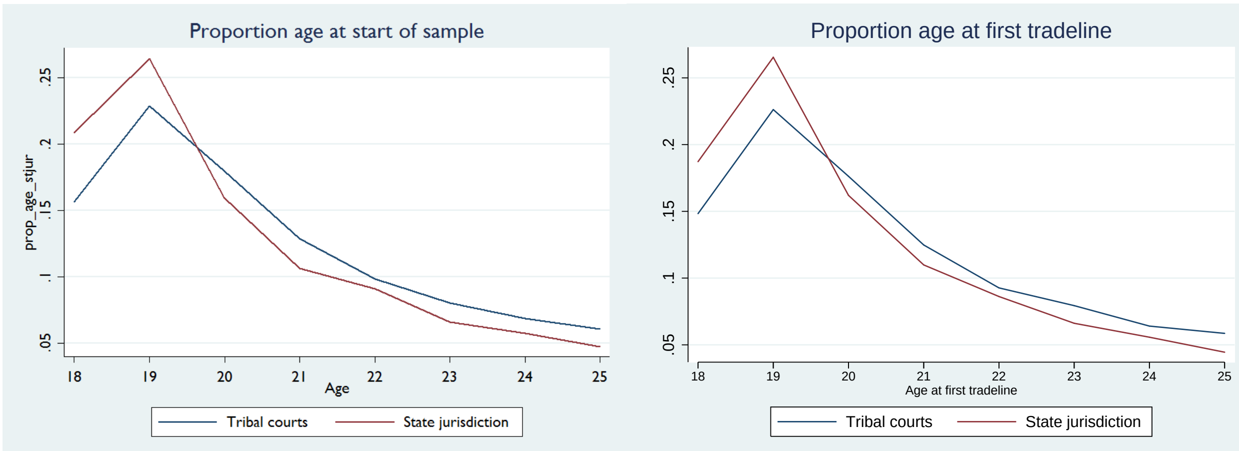


Figure 4: **Borrowing Constraints Across Reservations**

Note: This figure uses data from FRBNY - CCP, a 5% random panel of consumer credit reports from Equifax. The sample includes credit records sampled quarterly between 1999Q1 and 2015Q2 for borrowers who were 18 years old or younger in 1999, are 25 years or younger in year t, and whose credit report is associated with an address on Native American reservation lands as defined by the Bureau of Indian Affairs during the entirety of the sample. The figure plots fitted estimates of the following regression $supply\,ratio = \beta_0 + \sum_{t=2000+l}^{2015} \beta_l tribalcourt \times year(t) + \varepsilon$, where $tribalcourt$ equals one if the reservation adjudicates and enforces civil contracts in their own tribal courts and $year$ is a set of dummies for each year from 2000 to 2015. The dashed lines are 95% confidence intervals.

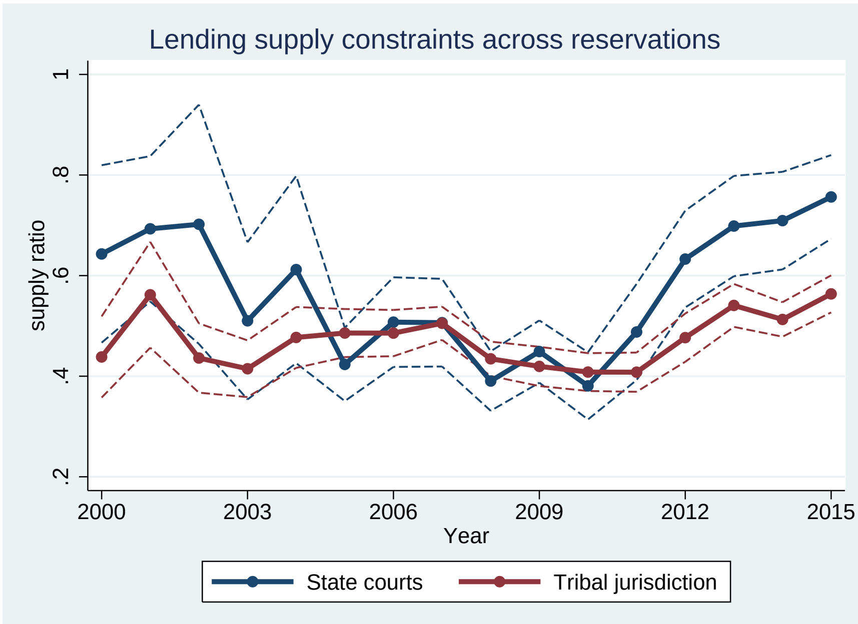


Figure 5: **Credit Scores Across Reservations**

Note: This figure uses data from FRBNY - CCP, a 5% random panel of consumer credit reports from Equifax. The sample includes credit records sampled quarterly between 1999Q1 and 2015Q2 for borrowers who were 18 years old or younger in 1999. State court reservations are reservations for which civil contracts are adjudicated in the state's court system, as prescribed according to Congressional legislation titled Public Law 280. Tribal court reservations are the tribe's court system adjudicates and enforces civil contracts. The dependent variable *riskscore* is similar to a consumer's FICO score, it varies between 280 and 840, and offers an assessment of the *i*'s credit-worthiness.

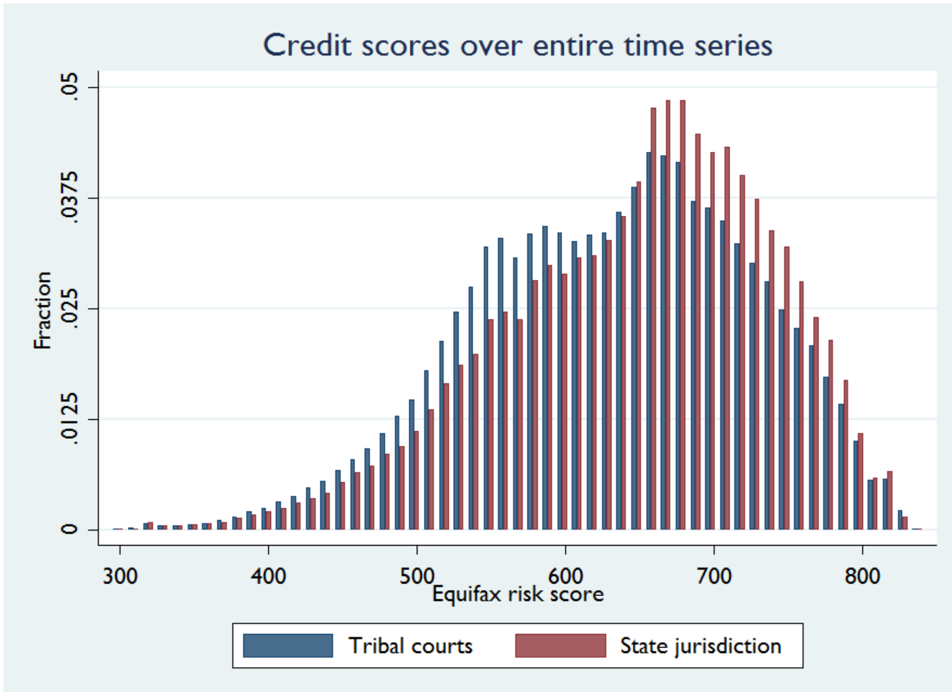


Figure 6: **Moving Away From a Reservation**

Note: This figure uses data from FRBNY - CCP, a 5% random panel of consumer credit reports from Equifax. The sample includes credit records sampled quarterly between 1999Q1 and 2015Q2 for borrowers who were 18 years old or younger in 1999 and whose first credit report is associated with an address on Native American reservation lands as defined by the Bureau of Indian Affairs. State jurisdiction reservations are reservations for which civil contracts are adjudicated in the state's court system, as prescribed according to Congressional legislation titled Public Law 280. Tribal court reservations are the tribe's court system adjudicates and enforces civil contracts. The bars are equal to the average outcome belonging to consumers who are no longer on reservation lands minus the average for consumers on reservation lands. The samples include consumers whose first credit report was on tribal or state court reservations. The variable *riskscore* is similar to a consumer's FICO score, it varies between 280 and 840, and offers an assessment of the i's credit-worthiness. High credit is maximum credit limit on i's revolving credit accounts. Number of (open) accounts is the number of (open) credit lines on the consumer's report. The variable $supply\,ratio$ is the number of new credit lines over the number of hard credit inquiries (last 12 months).

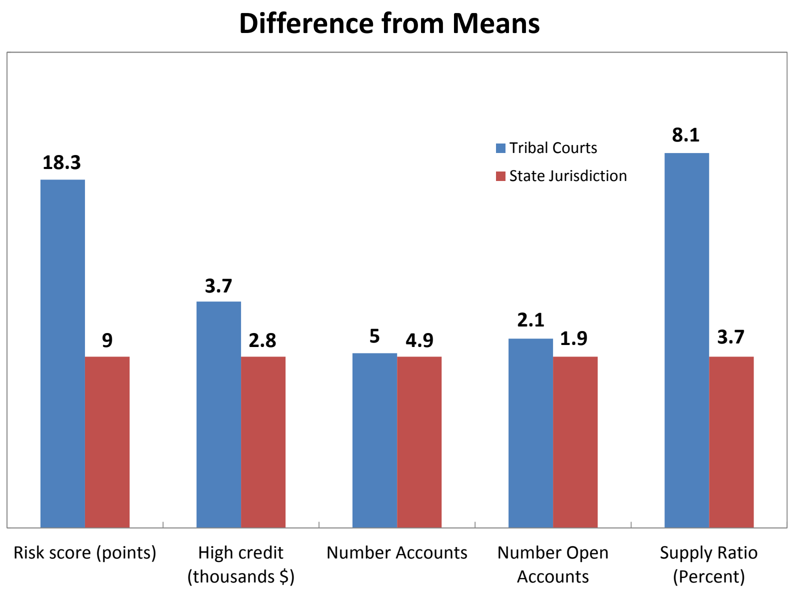
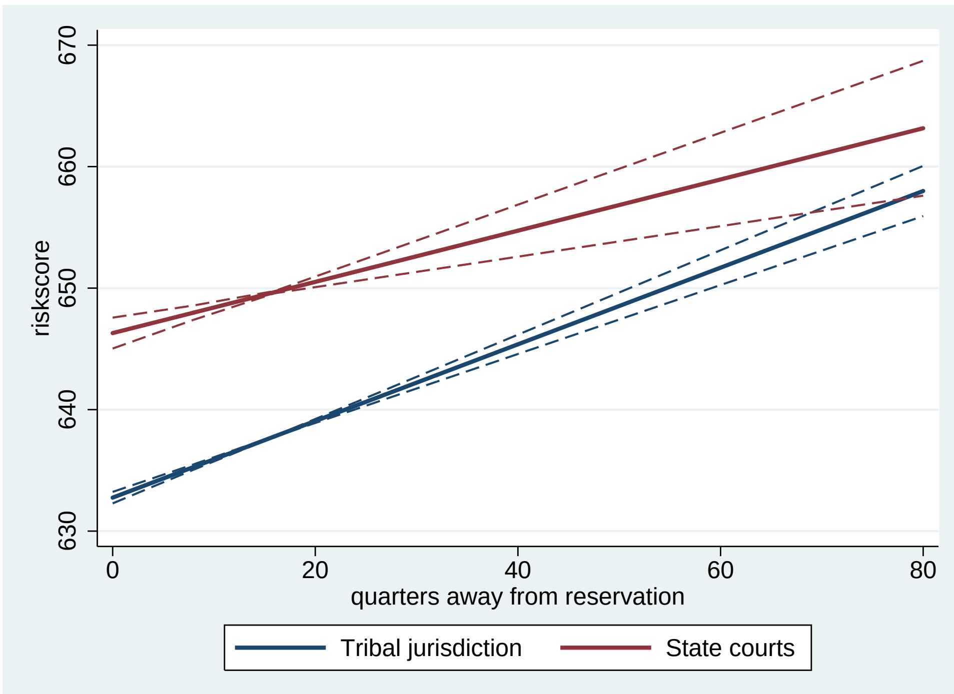


Figure 7: **How Long Does it Take to Catch Up?**

Note: This figure uses data from FRBNY - CCP, a 5% random panel of consumer credit reports from Equifax. The sample includes credit records sampled quarterly between 1999Q1 and 2015Q2 for borrowers who were 18 years old or younger in 1999 and whose first credit report is associated with an address on Native American reservation lands as defined by the Bureau of Indian Affairs. The sample is further restricted to consumers who eventually leave the reservation lands. The figure illustrates the fitted model

$$riskscore_{it} = \gamma_t + \beta_1 quarters away_{it} + \beta_2 birthyear_i + \varepsilon_{it}$$

where *quarters away* is the number of quarters that have passed since i has moved off of the reservation lands. *birhyear* is a set of dummy variables for i's year of birth. State jurisdiction reservations are reservations for which civil contracts are adjudicated in the state's court system, as prescribed according to Congressional legislation titled Public Law 280. Tribal court reservations are the tribe's court system adjudicates and enforces civil contracts. The dotted bands represent 95% confidence intervals calculated using standard errors clustered by date and the Census tract of i's first credit report.



Online Appendix to:

Growing Up Without Finance

(intended for online publication)

Appendix Section A.2: Additional tables

Table A.1: **Banking Development and Public Law 280**

Note: This table summarizes the evidence from prior studies on the effects of Public Law 280, which gave state courts authority to adjudicate contracts on a subset of Native American reservations. Panel A summarizes evidence on differences in economic and financial market conditions prior to PL280 from Table 1 in Brown, Cookson, and Heimer (2016b) and Tables 1 and 2 in Parker (2012). The evidence from Brown, Cookson, and Heimer (2016b) is at the county level, where a county is classified as falling under state (tribal) court jurisdiction if Public Law 280 applies (does not apply) to the reservation that has a headquarters in the county. The evidence from Brown, Cookson, and Heimer (2016b) is collected from the 1950 U.S. Census, except for bank branches, bank loans, and bank assets, which come from the 1952 edition of Polk's Bank Directory. The data from Polk's is a county-level aggregate of loans, assets, or branches for banks that are headquartered in that county. These variables are converted to per capita using the county's population according to the 1950 Census. The *family incomes* measure is the county's median income expressed in terms of income buckets running from zero (lowest income range) to nine (highest). The evidence from Parker (2012) on per capita credit is by Bureau of Indian Affairs (BIA) Administrative Area, where a BIA area is classified as falling under state jurisdiction if PL280 affected at least 50% of Native Americans in the BIA area. The evidence from Parker (2012) on per capita income is by reservation. Panel B summarizes evidence from Table 4 in Brown, Cookson, and Heimer (2016b) on PL280's effect on contemporaneous banking development. The specifications in Brown, Cookson, and Heimer (2016b) isolate the effect of state court jurisdiction on banking development after benchmarking against banking development in adjacent (off reservation) counties.

Panel A: Conditions prior the passage of PL280

	State Courts	Tribal Courts	Difference	p-value	Level	Time period	Source
bank branches per capita ($\times$1000)	0.0248	0.0313	-0.0065	*0.579*	county	1952	Brown, Cookson, and Heimer (2016b)
bank loans per capita	201.1	191.8	9.29	*0.909*	county	1952	Brown, Cookson, and Heimer (2016b)
bank assets per capita	614.2	596.7	17.51	*0.942*	county	1952	Brown, Cookson, and Heimer (2016b)
credit per capita from customary lenders (2008$)	263	648	-385	–	BIA area	1951-1952	Parker (2012)
per capita income (2008$)	2,640	2,678	-38	*0.865*	reservation	1938	Parker (2012)
family incomes (decile rank)	5.85	5.81	0.04	*0.887*	county	1950	Brown, Cookson, and Heimer (2016b)
unemployment rate	0.0596	0.0601	-0.00053	*0.948*	county	1950	Brown, Cookson, and Heimer (2016b)

Panel B: Banking development following PL280

Outcome measure	Finding	Level	Time period	Source
indicator for any lending	banks significantly more likely to originate loans on reservations under state courts	bank-county	1997-2003	Brown, Cookson, and Heimer (2016b)
log(1+ bank branches per 10,000 residents)	banking density 20% greater on reservations with state courts	county	1997-2003	Brown, Cookson, and Heimer (2016b)

Table A.2: **The Location of Borrowers**

Note: This table presents the locations of consumers when they enter the FRBNY - CCP panel data set (Panel A). It is also includes consumer-quarter observations for their locations over the course of the panel (Panel B).

Panel A: *Location when consumer enters the sample, on-reservation*

Census Region	State	State courts	Tribal courts	Total
Midwest - East North Central	MI	0	845	845
	WI	1,013	50	1,063
Midwest - West North Central	IA	104	0	104
	KS	0	282	282
	MN	516	235	751
	ND	0	127	127
	NE	7	58	65
	SD	0	807	807
Northeast - Middle Atlantic	NY	156	0	156
Northeast - New England	ME	0	68	68
South - East South Central	MS	0	250	250
South - South Atlantic	FL	262	0	262
	NC	0	279	279
	SC	0	55	55
South - South Central	OK	0	451	451
West - Mountain	AZ	0	1,662	1,662
	CO	0	142	142
	ID	0	268	268
	MT	0	579	579
	NM	0	735	735
	NV	0	107	107
	UT	0	238	238
	WY	0	309	309
West - Pacific	AK	8	0	8
	CA	971	34	1,005
	OR	0	224	224
	WA	0	3,804	3,804
	Total	3,037	11,609	14,646

Panel B: *Consumer-quarter observations including on- and off-reservation*

Census Region	State	State courts	Tribal courts	Total
Midwest - East North Central	IL	439	840	1,279
	IN	125	331	456
	MI	296	23,228	23,524
	OH	27	504	531
	WI	25,812	1,343	27,155
Midwest - West North Central	IA	2,621	399	3,020
	KS	53	7,236	7,289
	MN	13,285	6,190	19,475
	MO	50	745	795
	ND	264	2,928	3,192
	NE	225	1,253	1,478
	SD	50	11,425	11,475
N/A	PR	0	1	1
Northeast - Middle Atlantic	NJ	27	376	403
	NY	3,894	738	4,632
	PA	125	589	714
Northeast - New England	CT	12	24	36
	MA	162	395	557
	ME	18	1,746	1,764
	NH	66	23	89
	RI	0	35	35
	VT	0	6	6
South - East South Central	AL	44	156	200
	KY	80	310	390
	MS	11	4,993	5,004
	TN	100	645	745
South - South Atlantic	DC	60	114	174
	DE	23	9	32
	FL	6,913	886	7,799
	GA	349	950	1,299
	MD	116	281	397
	NC	283	6,113	6,396
	SC	98	1,795	1,893
	VA	417	814	1,231
	WV	1	76	77
South - West South Central	AR	59	158	217
	LA	58	275	333
	OK	114	10,292	10,406
	TX	423	3,434	3,857
West - Mountain	AZ	338	33,324	33,662
	CO	368	4,551	4,919
	ID	17	5,771	5,788
	MT	114	8,713	8,827
	NM	81	13,010	13,091
	NV	312	3,105	3,417
	UT	87	5,646	5,733
	WY	74	6,363	6,437
West - Pacific	AK	109	445	554
	CA	21,712	5,787	27,499
	HI	127	223	350
	OR	144	6,402	6,546
	WA	338	85,281	85,619
	Total	80,521	270,277	350,798

Table A.3: **Credit Market Entry and Bank Branching Expansion - Alternative Sample Periods and Specifications**

Note: This table presents estimation results of the following Cox-proportional hazard model

$$h_i(t) = h_0(t)\,exp\left(\beta_1 tribalcourt_i + \beta_2 dereg.index_{it} > 0 + \beta_3 tribalcourt_i \times dereg.index_{it} > 0 + X_i^{'}\Gamma\right)$$

using data from FRBNY - CCP, a 5% random panel of consumer credit reports from Equifax. The sample includes credit records sampled quarterly between 1999Q1 and 2004Q4 for borrowers whose first credit report is associated with a Census tract on reservation lands as defined by the Bureau of Indian Affairs. The baseline hazard function is given by $h_0(t)$, where t is the consumer's age. The variable $tribalcourt$ equals one if the consumer resides on a reservation using tribal courts as determined by Public Law 280. The variable $dereg.index > 0$ is from Rice and Strahan (2010). It equals one if the state has employed any of the banking deregulation measures allowed by the Interstate Banking and Branching Efficiency Act of 1994, and zero otherwise. The hazard functions are stratified by date (quarterly). Standard errors clustered by date are in parentheses. *, **, and *** indicate statistical significance at the one, five, and ten percent levels.

Panel A: *time to first credit report*

sample period:	$\leq$ 2004		$\leq$ 2007		$\leq$ 2010	
$t = age - 18$	(1a)	(2a)	(3a)	(4a)	(5a)	(6a)
tribalcourt	-0.301***	-0.217**	-0.217***	-0.153**	-0.231***	-0.208***
	(-3.50)	(-2.23)	(-3.70)	(-2.24)	(-4.40)	(-3.17)
dereg.index > 0	0.106	0.0700	0.0705	0.0526	0.0716*	0.0250
	(1.61)	(0.79)	(1.52)	(0.82)	(1.83)	(0.43)
tribalcourt × dereg.index > 0	0.141	0.175	0.0747	0.106	0.0759	0.159*
	(1.48)	(1.44)	(1.11)	(1.15)	(1.31)	(1.87)
date quarter strata	x	x	x	x	x	x
Census tract FE		x		x		x
N (consumer-quarter)	46,753	46,753	73,499	73,499	100,108	100,108
N (consumers)	6,166	6,166	8,629	8,629	11,050	11,050

Panel B: *time to first tradeline*

sample period:	$\leq$ 2004		$\leq$ 2007		$\leq$ 2010	
$t = age - 18$	(1b)	(2b)	(3b)	(4b)	(5b)	(6b)
tribalcourt	-0.365***	-0.368***	-0.303***	-0.379***	-0.315***	-0.430***
	(-4.27)	(-2.88)	(-4.29)	(-4.15)	(-5.20)	(-5.15)
dereg.index > 0	0.0686	-0.107	-0.0350	-0.229***	-0.0385	-0.234***
	(0.81)	(-0.89)	(-0.58)	(-2.68)	(-0.78)	(-3.27)
tribalcourt × dereg.index > 0	0.181*	0.387**	0.170**	0.434***	0.173***	0.461***
	(1.85)	(2.32)	(2.24)	(3.62)	(2.65)	(4.27)
date quarter strata	x	x	x	x	x	x
Census tract FE		x		x		x
N (consumer-quarter)	59,286	59,286	100,341	100,341	146,255	146,255
N (consumers)	6,166	6,166	8,629	8,629	11,050	11,050

Table A.4: **Bank Branches and Consumer Financial Health**

Note: This table presents OLS estimation results of the following specification

$$Y_{it} = \gamma_t + \gamma_s + \beta_1 tribalcourt_i + \beta_2 bank\,branches_i + \beta_3 birthyear_i + \varepsilon_{it}$$

using data from FRBNY - CCP, a 5% random panel of consumer credit reports from Equifax. The sample includes credit records sampled quarterly between 1999Q1 and 2015Q2 for borrowers 25 years old or younger. The sample is confined to consumers who only appear on reservation lands in the data at all points in the FRBNY - CCP sample. The dependent variable *riskscore* is similar to a consumer's FICO score, it varies between 280 and 840, and offers an assessment of consumer i's credit-worthiness.*bank branches* is the number of bank branches per 1000 residents at the county-level from the 2000 Summary of Deposits (FDIC), which we normalize so that a one unit increase equals a one standard deviation increase (Z). Median Census tract income and employment rates come from the 2000 U.S. Census. Fixed effects for date (quarterly) and i's current state are γ_t and γ_s, respectively. Standard errors are clustered by current Census tract and date. Stars *, **, and *** indicate statistical significance at the one, five, and ten percent levels.

	dep var = riskscore				
	sample: consumers at least 28 years old, on reservation				entire sample
	(1)	(2)	(3)	(4)	(5)
tribal court	-	-	-	-	-6.25
					(11.2)
bank branches per capita (Z)	9.108***	6.829***	11.18***	8.935***	9.12*
	(1.52)	(1.50)	(1.45)	(1.57)	(5.17)
tract employment rate (Z)		14.26***	2.709**	3.309**	3.537**
		(1.01)	(1.36)	(1.41)	(1.42)
median tract income (Z)			24.59***	23.51***	22.23***
			(1.78)	(1.95)	(2.16)
birth year FE	x	x	x	x	x
date quarter FE	x	x	x	x	x
Census region FE				x	x
N	11,811	11,811	11,811	11,799	11,799
R^2	0.017	0.036	0.056	0.070	0.070

Appendix Section A.2: Are Movers Different Across Reservations?

It would be a potential concern with our analysis of movers if individuals leaving tribal court reservations are systematically higher quality borrowers than those leaving state court reservations. We examine this possibility by studying both the propensity for individuals to move from tribal and state court areas, and the debt repayment activity of the borrowers who do move away. If consumers exhibit different delinquency rates after leaving the reservation, they were plausibly of different underlying borrower quality.

To examine whether there are differences in the propensity for borrowers to leave tribal and state court reservations, Table A.5 reports estimates of the following regression specification:

$$mover_i = \gamma_t + \gamma_c + \beta_1 tribalcourt_i + \varepsilon_{it}.$$

where $mover_i$ equals one if consumer i moves from the reservation during our sample period. Individuals growing up on tribal court reservations are significantly less likely to move away from the reservation than individuals growing up in state court areas. The significant negative relation between growing up in a tribal court area and subsequently moving away is robust to including fixed effects that control for both the date of the individual's first credit report and the Census tract in which the individual grew up. The negative coefficient estimate on the tribal court indicator persists after controlling for the area's overall level of employment, income, and banking activity.

To the extent these results reflect constraints on the ability of individuals from low financial development (tribal courts) to move, our estimates in Table 6 showing relatively stronger effects on financial health for movers from tribal court areas would tend to understate the true effect of low financial development. In this case, the subset of individuals from tribal court reservations would not fully reflect the (poor) financial health of the typical resident on a tribal court reservation, whereas the somewhat less strongly selected set of state court movers better reflects the typical resident. Absent the constraint on the ability to move, it would be reasonable to expect the change in credit outcomes to be even larger than what we estimate.

These results suggest that there are real economic consequences of weak local credit markets embedded in this apparent constraint from moving off reservation. Not only do tribal area borrowers gain more from leaving, but are less mobile in the face of seeing a greater benefit to household financial health from moving. This pattern of results suggests that local banking gaps have important effects that are difficult to overcome. These difficulties extend beyond the long-run persistence we document in the main body of the paper.

Table A.5: **The Propensity to Move From Reservations**

Note: This table presents estimates of the following regression estimated using OLS

$$mover_i = \gamma_t + \gamma_c + \beta_1 tribalcourt_i + \varepsilon_{it}.$$

The sample includes consumers i whose first observation was on a reservation Census tract. The dependent variable, *mover*, equals one if consumer i moves from the reservation during our sample. The variable *tribalcourt* equals one if the consumer resides on a reservation using tribal courts as determined by Public Law 280. Fixed effects for the date (quarterly) of i's first report and Census region are γ_t and γ_c, respectively. Standard errors are clustered by the date of i's first report. The stars *, **, and *** indicate statistical significance at the one, five, and ten percent levels.

	dep var = indicator if consumer leaves reservation			
	sample: cross-section of all consumers			
	(1)	(2)	(3)	(4)
tribalcourt	-0.0502***	-0.0618***	-0.0294**	-0.0365***
	(0.013)	(0.015)	(0.013)	(0.013)
tract employment rate (Z)			0.0322***	0.0281***
			(0.0055)	(0.0058)
median tract income (Z)			0.0468***	0.0477***
			(0.0078)	(0.0096)
bank branches per capita (Z)				0.0363***
				(0.010)
date of first credit report FE	x	x	x	x
Census region FE		x	x	x
N	14,380	14,380	14,380	13,447
R^2	0.20	0.21	0.22	0.22

To examine whether there are differences in borrower quality between consumers on tribal court versus state court reservations, Table A.6 presents estimates of the following regression specification for the fraction of past due credit accounts:

$$past\,due\,credit_{it} = \gamma_t + \gamma_c + \beta_1 tribalcourt_i + \varepsilon_{it} \tag{7}$$

where *past due credit* is the the fraction of credit accounts (tradelines) that are at least 90 days past due. To estimate the regression model, we use the sample of borrowers who move away from the reservation, have at least one credit line, and who are at least 28 years old in quarter t. We focus on older cohorts of movers to isolate fundamental differences in borrower quality from the influence of the credit environment in which the individual grew up.

Consumers who move away from tribal court reservations are no more or less likely than borrowers from state court reservations to have difficulties managing their credit. Whether we include fixed effects for i's birth date, Census region, current state, or current state-date fixed effects (columns 1 through 4, respectively), the coefficient estimate of β_1 is not statistically different from zero. While the estimate of β_1 is positive in all specifications, the effect gets smaller (from 0.023 in column 1 to 0.00098 column 4) as we apply increasingly stringent controls for economic conditions. In addition, even when we do not apply geographic controls, the positive coefficient on β_1 is at least in part explained by the composition of the borrower's debt obligations. The coefficient estimate shrinks by an order of magnitude when we control for the consumer's current riskscore (column 5), or the total obligation on their debt, including credit card balances (column 6), mortgages (column 7), or auto loans (column 8). These findings suggest that our tests focusing on moving consumers do not suffer from a selection bias caused by differences in borrower quality across reservation jurisdiction.

Table A.6: **Borrowing Quality After Moving Away from Reservations**

Note: This table presents estimates of the following regression estimated using OLS

$$past\,due\,credit_{it} = \gamma_t + \gamma_c + \beta_1 tribalcourt_i + \varepsilon_{it}\,.$$

The sample includes consumers i whose first observation was on a reservation Census tract, but are no longer located on a reservation. The sample includes consumers born between 1981 and 1987, inclusive. The observations are credit records occurring after the consumer is at least 28 years old. The dependent variable is the fraction of tradelines > 90 days past due, which equals the number of credit accounts 90 days past due, 120 days past due or in collections, or severe derogatory divided by the total number of credit accounts in the current quarter. The variable *tribalcourt* equals one if the consumer resides on a reservation using tribal courts as determined by Public Law 280. Fixed effects for date (quarterly) and Census tract for i's first credit report are γ_t and γ_c, respectively. Standard errors are clustered by date and the consumer's first Census tract. The stars *, **, and *** indicate statistical significance at the one, five, and ten percent levels.

	dep var = fraction tradelines > 90 days past due *sample*: consumers at least 28 years old, moved from resvn			
	(1)	(2)	(3)	(4)
tribalcourt	0.0234	0.0121	0.00294	0.000977
	(0.015)	(0.014)	(0.019)	(0.019)
date quarter FE	x	x	x	
Census region FE		x		
current state FE			x	
date quarter – current state FE				x
N	31,803	31,803	31,803	31,681
R^2	0.0022	0.0085	0.025	0.046

	(5)	(6)	(7)	(8)
tribalcourt	0.00590	0.00501	0.00949	0.0108
	(0.0096)	(0.014)	(0.010)	(0.015)
riskscore / 100	-0.172***			
	(0.0052)			
log($ bankcard payment)		0.0187***		
		(0.0056)		
log($ mortgage payment)			0.0124	
			(0.0079)	
log($ car payment)				0.0131
				(0.015)
date quarter FE	x	x	x	x
N	31,803	21,725	10,335	9,577
R^2	0.31	0.012	0.019	0.0082