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Landed Interests and Financial Underdevelopment in the United States[1]

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It is usually thought that concerns about the wealthy having an incentive to limit wider access to economic institutions such as finance are important only in poor, undemocratic countries. We find that even in the United States in the early decades of the twentieth century, landed interests seem to play a significant role in the development of finance. Counties with very concentrated land holdings tended to have disproportionately fewer banks per capita and fewer national banks. Moreover, aggregating land distribution up to the state level, states that had higher land concentration passed more restrictive banking legislation. Finally, financial underdevelopment, as determined historically by land concentration, was negatively correlated with subsequent manufacturing growth, right up to the 1970s. Since these effects are observed across counties possessing similar political and legal institutions at the state level, the evidence is suggestive that the origins of underdevelopment lie in the historical pattern of constituencies or interests as much as in political or legal institutions.

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INTRODUCTION

How important are political forces, as contrasted with economic circumstances, in shaping economic outcomes?[2] And how persistent is the legacy of political history? To address these questions, this paper relates county and state banking structures in the United States in the early twentieth century to the structure of agrarian land holdings. Agriculture was still a key sector at that time, though its importance relative to manufacturing varied across the country. This paper examines whether (i) powerful local landed interests shaped the structure of banking (ii) whether the influence of these interests varied with the structure of the local economy (iii) whether agrarian interests, operating through the structure of the banking system, influenced the growth of the manufacturing sector (iv) and finally, whether these effects persisted over time.

As in most developing countries today, banks were the main source of finance in the United States during this period. Past political battles, such as the one between Andrew Jackson and the Second Bank of the United States, led to more limited federal involvement in banking. As a result, the system was highly decentralized—effectively 48 different banking systems (Lamoreaux and Rosenthal (2005)). Economic efficiency would suggest that each system should have been tailored to the needs of the local economy. Yet some of the observed choices seemed sub-optimal. For example, branch banking—that is, allowing a single bank to operate many branches spread over the state—should have lead to a more efficient and stable financial system, as banks would have been better able to reap scale economies, diversify the risks of the local economy, and offer wider credit access to the

[2] On the political economy of financial development, see recent work by Benmelech and Moskowitz (2006), Bordo and Rousseau (2006), Haber and Perotti (2007), Haber (2005a,b), Morck, Wolfenzon, and Yeung (2006), Pagano and Volpin (2005), Perotti and Von Thadden (2006), Rajan and Zingales (2003a, b), and Sylla (2005).

population (Ramirez (2003), Carlson and Mitchener (2006)). Yet, only 16 states allowed branching in 1920 (Deheja and Lleras-Muney (2007)).

Clearly, there was hysteresis in banking structures. For example, once unit banks were in place, branching was perceived as a threat, for it would have allowed bigger urban banks to compete in rural areas, threatening the rents of small rural unit banks. As a result, unit banks formed associations, or joined hands with state regulators, to oppose branching (White (1982)). Furthermore, Economides, Palia, and Hubbard (1996) show that states with unit banking pushed for federal branching restrictions on national banks and for federal deposit insurance (which particularly favored small unit banks), suggesting that unit banks had political power in those states.

But this begs the question of why some states chose in the first place to have no branching, while others allowed it. Sylla et al. (1987) argues that by preventing out-of-state entry, states obtained revenues as they could extract taxes from the profitable monopoly in-state banks obtained in issuing demandable, currency-like claims. Kroszner and Strahan (1999) emphasize the added revenue that each in-state bank could obtain if it enjoyed a local monopoly, and suggest that this accounted for the limits on branching by even in-state banks.

These arguments, however, apply to all states. Why did some states go in for unit banking and others not? Moreover, if revenue was the primary objective, could they have not chosen a less distortionary means than creating monopolies and then taxing them heavily? Did states that chose unit banking had few other revenue options?

Another view of why some states chose to impose more restrictions on their banks is a “bottom-up” view, where local (that is, county-level) preferences for restrictions aggregated up to a state level preference. While this is not inconsistent with state-level rationales for restrictions, it does add a richness to the study of the political economy of regulation that is missed by examining only state-level decisions. Calomiris and Ramirez (2004) argue that unit banking provided insurance during periods of agricultural distress. Large national banks or state banks with branches could more easily foreclose on loans and transfer capital to less distressed areas. By preventing such reallocation, unit banking laws provided borrowers insurance. Of course, wealthier counties and farmers would benefit more from keeping capital in-house, and Calomiris and Ramirez indeed find more restrictions in states with greater farm wealth. However, while theirs is a "bottom-up" explanation, they only test it using state-level data.

A complementary explanation to insurance is that local control over banking allowed landed interests to more easily influence the direction of credit. One reason was clearly for the powerful to secure more credit for themselves. A second reason was to strategically offer credit (or deny it) to poorer and politically weaker sections of the local economy so as to facilitate rent extraction (Ransom and Sutch (1972), Wiener (1975)). For example, tenants could be exploited more easily if they were denied access to bank credit and had to depend on landlords for loans.

If indeed local landed interests had both the ability to affect, and the interest in influencing bank structure, we should see the effects not just in state banking laws, but also in the local (that is, county level) structure of banking. In particular, the same desire to restrict bank numbers so as to control them better should manifest itself at the local level, with competition being seen as detrimental to control. Put differently, monopoly rents could be the compensation offered to banks for following the diktat of the elite (that is, if the local bank was not owned by the elite themselves).

This then is the focus of our study. We first examine whether, correcting for conditions in the local economy as well as state effects (as well as the potential endogeneity of land concentration), the structure of landed interest had any effect on the number of separate banks in a county, as well as on the split between state and national banks. We also aggregate landed interests to see if they had effects on state laws, including those on branching and usury. We then go on to ask if the influence of landed interests was affected by other economic interests that might diminish, or enhance, their economic power. We further examine whether the structures created by local agrarian powers had economic effects beyond their narrow spheres – in particular, whether they influenced the growth of manufacturing. Finally, we look to see whether these effects of initial agrarian power structures had long run economic effects.

Our results are easily described. We find that counties with concentrated land holdings did, in fact, have fewer banks in the 1920s, even after correcting for state-level effects, for the possible endogeneity of land holdings, and for other factors that might affect the demand for banking services. Moreover, of the banks that were actually present in a county with concentrated landed interests, a disproportionate number were the more-easily-controlled state chartered banks rather than the less-easily-controlled national banks.

Our results linking land concentration and bank density do not appear to be because large farmers were more "bankable". Indeed, counties where the amount of land held by small farms was large relative to the amount of land held by large farms had significantly more banks per capita. We also find that factors that might enhance the economic power of large farmers (such as greater tenancy) appeared to increase their influence over local banking structure. By contrast, factors that reduced the economic power of landed interests, such as the greater presence of manufacturing in the county, reduced their influence. We also find the aggregated landed interests in a state influenced state laws governing branching or usury in a way that was favorable to those interests.

Perhaps most interesting, we find that by restricting banking development, the presence of landed interests constrained manufacturing growth, not just in the 1920s but decades after. This suggests that powerful local interests can project their influence not just to other segments of the local economy but also, by restraining the development of competing sources of power, well into the future.

There is an important benefit to going beyond previous studies and examining banking structures at the county level, rather than at the state level. Given that the rich and powerful want to control access to finance (see, for example, Rajan and Zingales (2003 a), it is important to understand how they do it. One channel could be through restrictive political and legal institutions (see Haber and Perotti (2007), for a survey).[3] And indeed, Benmelech and Moskowitz (2006) find that states that restricted political participation in the United States also had very restrictive usury laws limiting access. The immediate question is whether the power of the elite projects further – to times when democracy affords more political power to the rest (see, for example, Rajan (2007)). We examine a later period than Benmelech and Moskowitz do, when property qualifications for voting had been eliminated in nearly all states. But this enables us to ask whether the powerful have sources of influence beyond political and legal institutions (or, equivalently, whether as Rajan and Zingales (2003a) argue, the institutions themselves only mirror the underlying power distribution in

[3] A number of articles attribute the legacy of history on economic development more generally to inherited political institutions (North and Weingast (1989), Acemoglu, Robinson, and Johnson (2004)), or to inherited legal institutions (LaPorta et al. (1998)).

society). By largely focusing on within-state differences, we correct broadly for legal and political institutions, which enables us to investigate non-institutional sources of power.

This then allows us to examine the merit of theories that suggest local powers can perpetuate their interests even in fairly benign institutional environments (see Engerman, Mariscal, and Sokoloff (2002), Rajan and Zingales (2003a), or Rajan (2007)). Banerjee and Iyer (2005) (for India) and Ramcharan (2007) (for the United States) find within-country evidence that differences in land holdings may be associated with differences in the supply of public goods suggesting an important role played by landed interests. We complement these studies by showing that landed interests created significant differences in banking structure and subsequent growth, effects that persisted till recently even in a benign political environment like that of the United States. This would suggest that a single minded focus on institutional change as the key to development is probably unwarranted, the underlying distribution of interests or constituencies also needs to be addressed.

The rest of the paper is as follows. In section I, we describe the hypothesis and the data, in section II we present the basic regression and tests, in section III we examine whether landed interests affect state laws, in section IV we examine whether landed interests, through their effects on banking, affected subsequent manufacturing growth. We conclude in section V.

I. HYPOTHESIS AND DATA

A. Hypothesis

We turn to county and state level data on land inequality from 1890-1930 to help measure the impact of the concentration of agricultural wealth on the various indicators of financial development and the regulatory structure. We start by hypothesizing that concentrated landholdings can spawn well-funded interests groups that resist the spread of finance.

Why might rich, politically powerful, landowners want to limit broader access to finance? Through their wealth, income, and collateral, they may have ready access to finance. And by offering banks oligopolies in return for acquiescing to credit direction, landowners could supplement their economic power – helping to finance the favored with their own wealth, while squeezing the rest. For example, large landowners controlled much of Florida's banking system during the 1920s, and their attempts to channel credit into real estate, often by bribing state regulators, contributed to Florida's banking crash of 1926 [Vickers (1994)]. Meanwhile Ransom and Sutch (1972, 2001) detail the methods used by large Southern landowners to manipulate the supply of credit in order to extract rents from small farmers—the peonage system. In other parts of the country, claims of rent extraction also coincided with concentrated control of the local banking system [4].

Moreover, by controlling the local banking system, landowners could more easily prevent the siphoning of credit away from the countryside, thereby thwarting alternative local centers of economic power and status, such as manufacturers, from obtaining finance [Chapman (1934)]. Local financial underdevelopment and the suppression of competition also provided large landowners with insurance, for banks under their control would be less likely to foreclose [Calomiris and Ramirez (2004)].

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[4] In North Dakota for example, banking reform was a key platform of the Socialist/Populist party. And after winning the 1916 gubernatorial race with the help of small farmers, the party created the United States' first state owned bank, the Bank of North Dakota. The bank's charter begins: "Nor is it strange that under these conditions private interests sometimes take advantage of the needs of the people to keep down the prices of farm products, and exorbitantly to advance the prices of the things the farmers had to buy and the rates of interest for farm loans…the only permanent remedy lay in state ownership and control of market and credit facilities [Bank of North Dakota (1920), Lipset (1951)].

The political economy of banking legislation suggests that landowners may have restricted finance through state-level regulations, and we examine the variation in state banking regulations shortly [Economides et. al (1997), and Calomiris (2001)]. But landowners may also have had the ability to frame welcoming or restrictive local legislation, as well as local economic clout that allowed them to direct, or withhold business. For example, to finance production until harvest, small tenant farmers often used their crops as collateral. To the extent that local sheriffs treated the lien of landowners as superior to other claimants in the case of default, it would restrict the ability of tenant farmers to access outside sources of finance [Vann Woodward (1951), Weiner (1975)], reducing available business for banks. Thus we hypothesize that, correcting for state effects, the degree of land concentration in a county should affect the number of banks per capita in that county.

B. Data

Our measure for the concentration of land holdings is based on the distribution of farm sizes (data are available for each of the decennial census years 1890-1930) (see also Ramcharan (2007)). The data are collected by the U.S. Census Bureau at the county level; some specifications aggregate up to the state level. The US Census provides information on the number of farms falling within particular acreage categories or bins, ranging from 20-49 acres up to 1000 acres. Using the midpoint of each bin, we construct the Gini coefficient to summarize the farm acreage data. The Gini coefficient is a measure of concentration that lies between 0 and 1, and higher values indicate that larger farms account for a greater proportion of total agricultural land—that the ownership of agricultural wealth is unequally distributed, and skewed towards large farms. The average Gini coefficient of a county is 0.426, the maximum is 0.836 the minimum is 0.017, and the standard deviation 0.101. Figure 2 plots the regional variation in the data . Even in the South, which generally had higher levels of land concentration, there was significant heterogeneity among counties.

The Federal Deposit Insurance Corporation (FDIC) provides county level data on the number of state and nationally chartered active banks in the county, beginning in 1920. The box plot in Figure 3 indicates high levels of banking density in the upper Mid West, but again reveals substantial variation even among Southern counties. Table 1 provides details on data construction and sources, Table 2 provides summary statistics for the county variables, while Table 3 summarizes some of the state variables.

II. LAND INEQUALITY AND BANKING STRUCTURES

A. Banking density and concentration

Let us start by examining the relationship between the density of banks in a county and the concentration of land holdings. The dependent variable in Column 1 in Table 4a is the number of banks per capita in a county in 1920. The explanatory variables are the land concentration index for the county and state dummy variables. To this parsimonious specification, we also include a number of geographic controls including the county area, and its distance from various waterways. Waterways were centers of economic activity, with some of particular relevance to agriculture. Including these variables help control for plausibly exogenous determinants of a county's prosperity and the kind of economic activity it might undertake. For instance, waterways such as the Great Lakes in the upper mid west, and the Atlantic Ocean along the East coast helped spur industrialization and demand for financial services in those regions (Pred (1966)). In the estimates that follow, we correct standard errors for possible correlation between proximate counties.[5]

The coefficient estimate of concentration in the OLS regression is negative and strongly statistically significant (at the 1 percent level). A one standard deviation increase in land inequality is associated with a 0.27 standard deviation decline in the per capita number of banks circa 1920. In Column 2, we repeat the same exercise for 1930 and again find a negative and statistically significant coefficient estimate for land concentration.

Before making too much of this, we should recognize that there are potential biases in the estimated coefficient. Well known theoretical arguments predict that economic inequality can itself be shaped by credit availability and other forms of asset market incompleteness (Aghion and Bolton (1997), Bannerjee and Newman (1991)), making reverse causality a likely feature of the data. However, the biases could go in either direction. More banks might mean more credit availability, allowing more people to buy farms, and reducing concentration. On the other hand, more competition amongst banks may mean weaker relationships between banks and farmers, and could lead to greater foreclosures of marginal

[5] Nearby counties may share similar unobserved features—histories or cultural characteristics for example—that shape banking density. As a result, the correlation in the error term between county i and county j may be proportional to the distance between the two counties. We thus follow Conley [1998] and Rappaport [1999] and assume a spatial structure to the error covariance matrix. Specifically, for county pairs further than 150 kilometers apart—measured as the distance between the counties' geographic center-- we assume independence. Meanwhile, for county pairs less than 150 km apart, we use quadratic weighting:

$$E\left(\varepsilon_i \varepsilon_j\right) = \left[1 - \left(\frac{distance_{ij}}{150}\right)^2\right]\rho_{ij}$$

$$\widehat{\rho_{ij}} = e_i e_j$$

farmers in times of distress, leading to greater concentration (see Calomiris and Ramirez (2004) or Petersen and Rajan (1995)). The way to correct for such reverse causality is, of course, through instrumental variables.

B. Instrumental Variables Estimates

A large literature in agricultural economics suggests that land concentration in the United States is related to rainfall patterns (Ackerman and Harris (1946), Gardner (2002), Heady (1952), Tomich et. al (1995)). The underlying logic rests on the idea that given the technologies of the period, crops suited for plantation agriculture such as sugar cane, tobacco and rice thrived in warmer counties with regular and heavy rainfall. In contrast, grain—wheat and barley—which are better suited to more temperate climates, also exhibited less economies of scale. Virginia tobacco for example requires rainfall between 23 to 31 inches per annum, while Nebraska wheat usually thrives in regions that receive between 14 to 21 inches of rain per annum (Seitz (1948), Myers (1940)).

Thus, even within states, more arid counties—the Piedmont region of central Virginia for example—may have had a more equitable distribution of farm sizes because of their suitability for grain production. Engerman and Sokoloff (2002) also employ a similar argument to explain the role of geographic endowments in shaping historic cross country differences in land inequality across North and South America. And using US census data as early as 1860, Vollrath (2006) provides evidence consistent with the role of geographic endowments in shaping land inequality across a sample of US counties.

In the first column of Table 4b, therefore, we present estimates for a first stage where the dependent variable is land concentration in 1920 and the explanatory variables are the mean rainfall in the county computed over the last century, state dummies, and the geographical variables. The coefficient estimate on mean rainfall is positive and statistically significant at the one percent level, as the literature suggests. The second stage IV estimates are reported in Table 4a, column 3. The coefficient on instrumented concentration is negative and again statistically significant at the one percent level. Interestingly, the coefficient is about four times larger in magnitude than in the OLS regression, suggesting it had been biased towards zero. A standard deviation increase in land concentration reduces the number of banks per capita by about one standard deviation.

There is the concern, of course, that land concentration might proxy for some omitted variable that is also correlated with the number of banks per capita. In particular, a poor, low skilled population, as well as the very young, might not have the ability to farm land independently and might also be an unattractive target market for banks. We should also account for the possibility of discrimination, both in terms of blacks not having access to education, and in terms of their being denied access to financial services. Therefore, we include as additional controls the fraction of the county population that is illiterate, the fraction that is black, and the fraction that is young. Moreover, because banking density might be directly affected by the size and spatial distribution of the population, we include – the log population, as well as the fraction of the population that is urban (reflecting the degree to which population is unevenly distributed across the county). For instance, the more urban the population, the more the population is crowded in a few areas, and the fewer the bank offices needed to service them.

Of course, these demographic controls are arguably less exogenous than the geographic controls we included earlier. Nevertheless, it is heartening that in column 4 in Table 4a the coefficient estimate of concentration in the IV regression is negative, strongly statistically significant, and indeed a little larger in magnitude with these additional controls than the coefficient estimated in column 3. This suggests that concentration does not proxy for these controls. This will be our baseline regression. In what follows, we conduct some robustness checks.

In Table 5 column 1, the dependent variable is banks per capita in 1930, and we estimate the IV regression with the full panoply of geographic and demographic controls. The coefficient estimate for land concentration is again negative and strongly statistically significant. In Table 5 column 2, the dependent variable is a different measure of bank density, banks per square kilometer in 1920. Geographic and demographic controls are likely to be important here. Again, however, we find the coefficient of instrumented land concentration is negative and strongly statistically significant.

Once concern may be that a county with uniformly large farms will have a low Gini. While this is not inconsistent with some elements of our thesis (there is no need to repress finance if there are no small farmers/tenants to exploit), it is important to check that this does not drive our results. Therefore, we recalculate the Gini coefficient using only those counties with farm sizes in all bin categories—we are left with about 55 percent of the sample of counties. The coefficient estimates for the Gini are, however, qualitatively similar, and are available upon request.

Moving on to other concerns, perhaps land concentration is higher where agricultural output and the demand for finance is lower, either because of the nature of the workforce or the poor quality of the land. We already have some controls for the nature of the workforce in the county, but including the value of crops divided by the farm population in the county as an explanatory variable helps to directly capture the variation in agricultural income across counties. We lose some observations, and the estimated standard errors are higher, but the coefficient estimate for land concentration is still negative and statistically significant in Table 5 column 3, and similar in magnitude to the baseline. Instead of income, we control in column 4 for the value of agricultural wealth by including the average value of farm land in county. The estimated impact of land concentration remains negative and significant.

Finally, we should note that much of the increase in the number of banks occurred after 1890, as federal and state authorities competed to weaken chartering requirements, capital requirements, reserve requirements, and portfolio restrictions in order to attract more banks into their system (White (1982)). The number of state banks grew from 2534 in 1890 to 14512 in 1914 while the number of national banks grew from 3484 to 7518. Therefore a significant part of bank structure evolved post 1890. Land inequality in 1890 thus predates much of the structural change, and could also be a plausible instrument for land concentration in 1920.[6] We find that replacing the rainfall instrument in the basic specification in Table 4 column 4 with land inequality in 1890, the coefficient estimate of instrumented land inequality in 1920 (see Table 5 column 5) is negative and highly significant. Predetermination does not, however, imply the instrument satisfies the exclusion restriction. As a result, we will use the rainfall instrument as our baseline because we are more confident that it is plausibly exogenous.

[6] Inequality in 1890 may reflect more than weather patterns -- geographic factors (e.g., mountainous versus plains) as well as historic Federal policies may have also helped determine land distribution. For example, the Homestead Act of 1862, which gave 160 acres of farm land for a nominal $18 fee to help settle the Mid West, created a relatively equal distribution of land in that region that persisted until the 1930s (Everett (1970)).

C. National vs State Banks

The early years of the 20th century were years of fierce competition between federal and state regulatory authorities in a seeming race to the bottom (White (1982)). National banks were chartered by the Office of the Comptroller of Currency in Washington DC. As some of the banking scandals of the 1920s suggest, state chartered banks were easier for powerful landed interests to control than nationally chartered banks (Vickers (1994))[7]. One would expect, therefore, that local landed interests would discourage the spread of banks, but be particularly averse to the spread of national banks.

In Table 6 column 1, we report our baseline specification (that is, the specification in Table 4a, column 4), but with the dependent variable being the number of national banks per capita in 1920 . The coefficient on land concentration is negative and statistically significant, as is the coefficient in Table 6 column 2 where the dependent variable is the number of state banks per capita in 1920. Thus landed interests discouraged both types of banks, a reassuring finding. In Table 6 column 3, the dependent variable is the share of national banks to total banks in the county. The coefficient on land concentration is negative and significant – there are not just fewer banks of any kind but relatively fewer national banks in counties with concentrated landed interests. Note that by including state indicators, we control for any direct legislative impediments to the setting up of national banks in the state.

Finally, a note of caution is in order. Until the relaxation of the 1864 National Bank Act in 1913, national banks were barred from mortgage loans – that is, loans against land (Sylla (1969)). There is disagreement about the effectiveness of this restriction (Keehan and

[7] Politics and corruption in state bank chartering decisions well pre date the sample period. Bodenhorn (2002) for example documents the fight against corruption in bank chartering in New York State during the 1830s.

Smiley (1977)). Nevertheless, and despite the tremendous change in bank activity over this period, we cannot rule out the possibility that the past legal restrictions may have had some effect on national bank presence in 1920. One would certainly presume that counties with more urban populations would have a higher ratio of national banks and that is indeed the case, with the coefficient on share of urban population being positive and significant. It is much harder, though, after correcting for the share of urban population in the county, to attribute the finding that counties with relatively more concentrated land holdings have relatively fewer national banks in 1920 to historical legal restrictions.

D. Is Inequality a Proxy for Bankability?

One important concern is whether the negative correlation between land inequality and banks per capita reflects the interests of the landed in suppressing banks or whether it reflects the reduced number of people who need banking services when wealth is concentrated . In other words, it may be that large farmers are truly profitable for banks to target, while small farmers are not. So greater concentration of land holdings may imply fewer farmers are worth targeting, and fewer banks are needed. In the extreme, if there is one rich farmer and the rest are poor, one bank might suffice.

To get at this, we replace land concentration in 1920 in our baseline regression by a measure of the dominance of small farms in agricultural production: the ratio of land farmed in plots under 500 acres, the midpoint in the distribution, to land operated in plots bigger than or equal to 500 acres. If economic power and interests explain bank structures, we should find a positive coefficient estimate for the ratio. If small farmers are not “bankable”, we should find a negative coefficient. The estimates in Table 7 column 1 indicate a positive and statistically significant coefficient for the ratio, which is more in line with our basic hypothesis.

E. Relative Economic Power

If stunted banking structures are a result of the economic power and interests that emanate from skewed land holdings, we should find that factors that enhance, or reduce, the relative economic power or interests of large land owners should also affect the importance of land concentration in determining banking structure.

One such factor is the economic institution of tenancy. Sharecropping was very common in some Southern counties, and was a valuable source of rents for landowners, especially in counties where limited credit access enabled land owners to negotiate lucrative share cropping contracts with heavily indebted tenants[8]. Thus, because the profitability of tenancy depended on the underdevelopment of the financial system, landed interests would have been more likely to oppose wider credit access in counties where tenancy was more common. Indeed, crop lien laws that favored landlords and other barriers that restricted entry into the banking sector became widespread in regions where tenancy dominated. Moreover, because tenants often raised cash crops such as cotton, and depended on landlords to finance consumption until harvest, tenancy created significant differences in power, even for farmers operating similar sized plots. Small farmers were also more likely than large farmers to be tenants (Ransom and Sutch (1977, 2001), Van Woodward (1951)). Taken together, concentration in land holdings is likely to reflect a more skewed distribution of economic and political power when tenancy in a county is high than when it is low.

[8] For example, poor tenant farmers were often forced to buy seeds and tools from the land owner’s store at inflated prices. And their persistent indebtedness to the land lord kept tenant farmers tethered to the land to help pay off old debts and taxes (Brogan (1994)).

Given all this, we should therefore find that when we include the fraction of land in the county that is farmed under tenancy interacted with land concentration in the baseline regression (in addition to including tenancy directly), the coefficient on the interaction should be significantly negative. The estimates are reported in Table 7 column 2. The interaction between land inequality and the share of tenant farms in the county is negative and significant at the one percent level. The point estimates suggest that for a county at the 25th percentile level of tenancy in the sample, a one standard deviation increase in inequality is associated with about a 1.25 standard deviation decline in banking density. But for a county at the 50th percentile of tenancy, the impact is about 18 percent larger. Our results are robust to controlling for the direct impact of tenancy using both linear and quadratic terms. The negative coefficient in the case of the latter suggests that high levels of tenancy negatively affected banking density.

Another measure of the relative economic power of landed interests is the strength of manufacturing interests in the county. The greater the manufacturing value added per capita in the county, or the greater the importance of manufacturing relative to agriculture in the local economy, defined as the ratio of the value of manufacturing output to the value of manufacturing and agriculture output , the lower should be the power of landed interests, and therefore the effect of concentration of land holdings. So in Table 7 column 3, we include the interaction with the manufacturing share in our baseline regression, while column 4 interacts land concentration with the per capita manufacturing value added in dollars. To correct for any direct effects of manufacturing presence, we also include the manufacturing term and its square directly in the regressions.

Consistent with the hypothesis that landed elites may have been better able to influence banking in counties where they also controlled economic production, the interaction term is positive and significant. Thus, as the strength of manufacturing interests in a county increase, the adverse impact of land concentration on the per capita number of banks falls. The point estimates in column 3 suggest that for a county at the 25th percentile level of manufacturing share in the sample, a one standard deviation increase in inequality is associated with about a 1.17 standard deviation decline in banking density. But for a county at the 50th percentile of manufacturing share, the impact is about 20 percent smaller. Note that it is hard to argue that this reflects a greater demand for banking services in counties with more manufacturing share, because we control for the direct effects of manufacturing (through both linear and squared terms).

F. Inequality amongst the rest.

Some theories (see Rajan (2007), for example) suggest that it is not only inequality between the elite and the rest that is important, but also inequality within the rest that perpetuates restrictive policies; in a democratic society inequality among the rest prevents the rest from making common cause against the elite. To check this, in Table 7 column 5, we include the Gini coefficient for land holdings excluding the top two bins instead of the overall Gini coefficient in the baseline regression, and find a negative and significant coefficient as expected.

Of course, we cannot rule out the possibility that concentration excluding the largest landowners closely tracks concentration including them. Indeed, we would expect this if "technological" factors such as rainfall determined concentration. This deserves further investigation.

III. CONCENTRATED LAND HOLDINGS AND STATE BANKING LAWS

If powerful landed interests influence the banking structure within a county, they must also influence banking legislation in a state. For instance, influence over the local financial system would have been made easier, in part, by legal branching restrictions, which prevented national banks and large state banks from entering local markets. And although the regulatory interpretation of branching laws varied from state to state (Mitchener and Carlson (2006)), differences in state level de jure banking laws can nevertheless provide key corroboratory evidence on land inequality's role in shaping the financial system.

The dependent variable is an indicator if a state permitted branching in a particular year. We collect the data for the years 1900-1930 (see Dehejia and Lleras Muney (2007)). Using a simple linear probability model, we measure the effect of land concentration (aggregated up to the state level) on the probability that a state permitted state wide bank branching. We include state fixed effects, year indicators, and cluster standard errors at the state level. The simple linear probability model in Table 8 column 1 suggests that a one standard deviation increase in land concentration at the state level is associated with a 0.16 decrease in the probability of observing laws permitting branching. Conditioning on demographic, economic and political variables does not significantly change this estimate (Table 8 column 2).

A less well-studied method of constraining credit is through usury laws. Low ceilings on interest rates make it difficult to charge rates that allow a lender to break even on high-risk credits. As a result, only the rich with unimpeachable creditworthiness will be able to borrow when usury ceilings are low. Benmelech and Moskowitz (2007) collect data on usury ceilings across the United States ending in the late nineteenth century and indeed find that usury limits do adversely affect lending activity. They also find that the strictness of usury laws increases with the extent that other groups are excluded from political activity, suggesting it is a form of economic exclusion.

We have data on land concentration in 1890 while Benmelech and Moskowitz have data on state usury laws in 1890. Marrying the data they collected, and were kind enough to share, with our data on land concentration, we find in Table 8 column 3 that land concentration in 1890 is negatively and significantly correlated with the interest rate ceiling imposed by usury laws in 1890, and the estimate increases in magnitude with the addition of obvious controls.[9]

In sum then, it does appear that concentrated land holdings at the state level is correlated with laws restricting the development and availability of finance. This is consistent with our finding that concentrated land holdings are also associated with fewer banking offices at the county level. That both state and county effects go in the same direction is reassuring. Now we turn to examining whether land concentration has real effects on growth.

IV. LAND CONCENTRATION, BANK STRUCTURE, AND MANUFACTURING GROWTH

While the evidence thus far is suggestive that landed interests might have retarded the development of local banks, we have not provided strong evidence that this affected the real economy. One could look at the effects of banking sector development on the agricultural sector, but this might be conflated with the direct effect of agricultural concentration on agricultural growth.

[9] To deal with situations where a state has no ceiling, Benmelech and Moskowitz impose a rate that is the average for all states in 1890 plus 5 percentage points. We follow their convention.

A. Land Concentration and Manufacturing Growth

An alternative is to examine manufacturing growth. Clearly, this depends on financial sector development (see Rajan and Zingales (1998), for example). Equally clearly, it is unlikely to be directly affected by land concentration in the county, other than through the effect of land concentration on economic institutions such as banking.

In Table 9 column 1, the dependent variable is real per capita manufacturing value added growth in the county between 1920 and 1930 . The explanatory variables are land concentration in 1920, the initial share of real per capita value added in manufacturing in 1920 (to capture convergence effects), demographic and geographic controls, as well as state indicators (which capture between-state differences in manufacturing growth). In addition to the hypothesized finance channel, land concentration might also affect manufacturing growth through the initial mix or scale of manufacturing industries. For instance, small scale manufacturing that relies on local agricultural inputs, such as agricultural processing plants, might have proliferated in more concentrated counties, and performed differently than larger enterprises over the 1920s. Thus, to control for this potential mechanism, we also proxy for the initial type or scale of manufacturing within the county by including the average horsepower employed in a manufacturing firm in 1920. (Our results are qualitatively similar when we use only the baseline controls, excluding the average horsepower measure).

The coefficient on land concentration is negative and strongly statistically significant. A one standard deviation increase in the land Gini in 1920 is associated with a 5.7 percentage point decrease in growth (over the decade), which is 8.6 percent of the standard deviation in growth rates across counties. Of course, we are interested in the effect of land concentration working through the development of the banking sector. So in Table 9 column 2, we report

IV estimates where we replace land concentration with banks per capita, instrumented with land concentration. The instrumented number of banks per capita has a positive and significant coefficient estimate, as expected.

One concern, of course, is that it may be that areas where land is very concentrated are also areas that are difficult for manufacturing to be set up. In the extreme, if there are only a few "accidental" manufacturing units in a county because of the hostility of the terrain, their growth is likely to be very low. One way to address this concern is to focus only on counties where there is a sizeable manufacturing presence already. In Table 9 column 3, we include county observations only if the share of manufacturing in total value added is above the median for all counties. Within this sub-sample of counties with a sizeable manufacturing presence, the coefficient estimate for instrumented bank concentration is even larger.

Finally, perhaps the right way to undertake this analysis is to also instrument land concentration. The problem with the required 3 SLS estimate is that it demands a lot of the data. Standard errors blow up and the coefficient on instrumented banks per capita is negative (but not statistically different from zero) when the instrument for land concentration in 1920 is rainfall. However, using land concentration in 1890 as the instrument, the coefficient estimate for banks per capita is positive and statistically significant. We do not report these estimates, but they are available on request.

B. Land concentration, banking, and long run economic growth.

Does the legacy of land concentration have an impact far into the future? If indeed areas with concentrated land holdings manage to restrain the spread of banking, and thereby constrain the growth of manufacture, then powerful landowners might have been able to project their power into the future, even though agriculture became relatively unimportant in most other areas of the United States.

In Table 10 columns 1-3, we examine the coefficient estimate of banks per capita (instrumented by land concentration in 1930) regressed on subsequent average annual manufacturing value added growth for the years 1930-1947, 1947-1967, and 1967-1982. We find that the effect is negative but falls in magnitude over time, so much so that it is no longer significant for the period 1967-82.

Kroszner and Strahan (1999, Table 1, p 1441) indicate that the period of the 1970s and 1980s was when many of the restrictions on within-state branching and inter-state branching started being dismantled. They argue this was because, starting in the 1970s, technological advances such as ATMs, the advent of new forms of competition such as money market mutual funds, and the rapidly decreasing costs of communications reduced the importance of distance, and thus the ability of local interests to constrain access to finance. This is indeed what Petersen and Rajan (2002) find – the distance between banks and their clients grew steadily over the late 1970s and 1980s. The decline in the ability of local interests to suppress access to finance, as technology progressed and new sources of competition emerged, is perhaps why the influence of local landed interests over manufacturing growth eventually waned.

V. CONCLUSION

The evidence in this paper suggests that local landed interests had substantial influence over the course of banking development in the United States, even as recently as the early twentieth century when the United States was well on its way to becoming the foremost industrial economy in the world. Some of this influence was malign, as evidenced in the lower rate of manufacturing growth in counties with powerful landed interests.

Interestingly, we find large local effects, even though institutions that are commonly thought of as important for economic growth, such as broad political and legal institutions, are held relatively constant. This is not to suggest that institutions are unimportant (we have nothing to say on that), but rather that large variations in developmental outcomes may stem simply from differences in the distribution of economic wealth and power in a society (see Banerjee and Iyer (2005) or Rajan (2007), for example). Examining the relative importance of constitutions and constituencies or, equivalently, institutions and interests, is a task for future research.

Table 1: Variables' Definitions and Sources

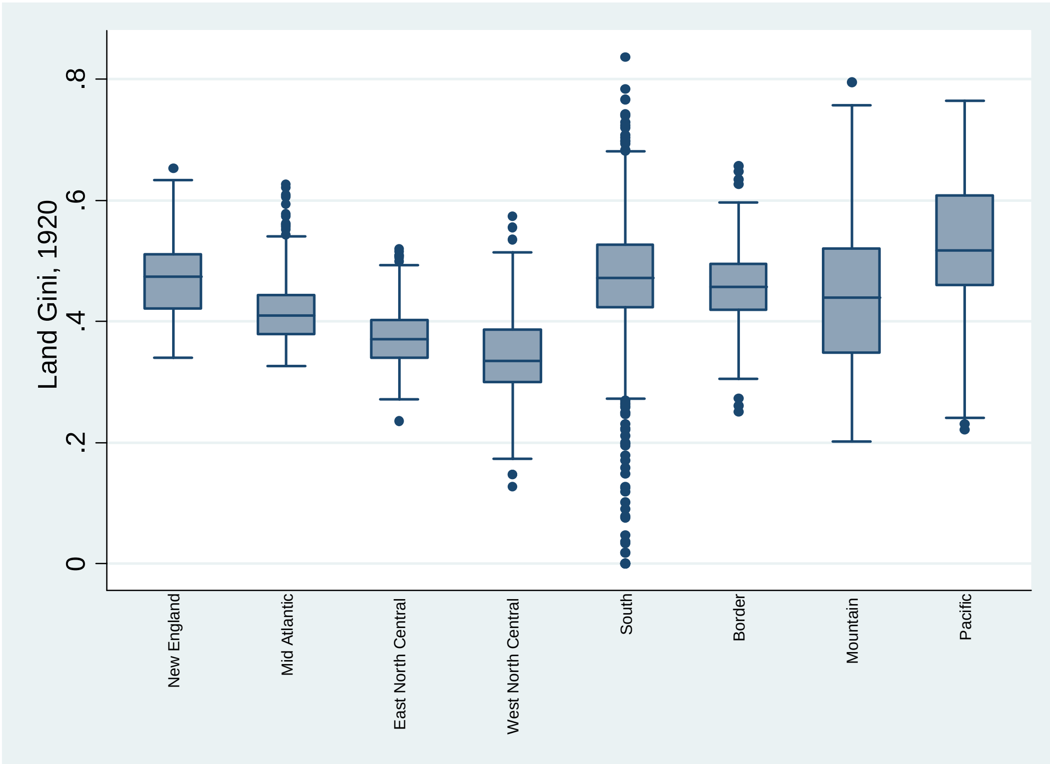
Variable	Source	Definition
Land Inequality (Gini Coefficient)	United States Bureau of Census; Inter-University Consortium for Political and Social Research (ICPSR) NOs: 0003, 0007,0008,0009,0014,0017	The number of farms are distributed across the following size (acres) bins: 3-9; 10-19 acres; 20-49 acres; 50-99 acres; 100-174;175-259;260-499;500-999; 1000 and above. We use the mid point of each bin to construct the Gini coefficient; farms above 1000 acres are assumed to be 1000 acres. The Gini coefficient is given by $1+1/n-\left[2/(m*n^2)\right]\sum_{i=1}^{n}\left(n-i+1\right)y_i$ Where farms are ranked in ascending order of size, y_i, and *n* is the total number of farms, while *m* is the mean farm size. [Atkinson, A.B. (1970)].
Number of State and National Banks Active in each county.	Federal Deposit Insurance Corporation Data on Banks in the United States, 1920-1936 (ICPSR 07).	
Urban Population; Fraction of Black Population; Fraction of Population Between 7 and 20 years; County Area; County Population; Value of Crops/ Farm Land Divided by Farm Population	United States Bureau of Census; Inter-University Consortium for Political and Social Research (ICPSR) NOs: 0003, 0007,0008,0009,0014,0017	
Distance From Mississippi River; Atlantic; Pacific and the Great Lakes.	Computed Using ArcView from each county's centroid.	
Annual Mean Rainfall	Weather Source 10 Woodsom Drive Amesbury MA, 01913 (Data Compiled from the National Weather Service Cooperative (COOP) Network	The COOP Network consists of more than 20,000 sites across the U.S., and has monthly precipitation observations for the past 100 years. However, for a station's data to be included in the county level data, the station needs to have a minimum of 10 years history and a minimum data density of 90 percent: ratio of number of actual observations to potential observations. If one or more candidate stations meet the above criteria the stations' data are averaged to produce the county level observations. If no candidate station exists within the county, the nearest candidate up to 40 miles away in the next county is substituted. The arithmetic mean and standard deviation level of rainfall are computed from the monthly data for all years with available data.

Table 2. County Level Variables, Summary Statistics

	Circa 1920		Circa 1930	
	Mean	Standard Deviation	Mean	Standard Deviation
Inequality	0.43	0.10	0.43	0.10
All Banks, Number Per 100 Square Kilometers	0.08	0.51	0.07	0.40
All Banks, Per 1000 Inhabitants	0.48	0.04	0.37	0.26
State banks, as fraction of all banks	0.71	0.25	0.69	0.27
County Area (Logs)	7.38	0.98	7.38	0.98
National banks, Per 1000 Inhabitants	0.11	0.130	0.09	0.10
Total Population (Logs)	9.76	1.03	9.81	1.05
Urban Population	19.01	24.83	21.30	25.73
Population Density	61.13	902.56	67.75	836.09
Black Population, as a fraction of total population	0.12	0.19	0.11	0.18
5-17 year olds, as a fraction of total population	0.30	0.04	0.30	0.04
Per capita growth in the value of farm lands and buildings, 1920-1930	-0.33	0.35	---	---
Per capita value added in manufacturing, 1920 (logs)	0.01	0.66	---	---
Per capita value of crops, in 1920 (logs)	-0.63	0.51	---	---
Per capita growth in manufacturing value added, 1920-1930	3.61	1.46	---	---
Per capita growth in the value of crops, 1920-1930	6.57	1.18	---	---
Value of fruits, as a share of total agriculture value added	4.35	9.74	5.40	11.97
Value of cereals, as a share of total agriculture value added	42.23	25.06	35.80	26.34
Value of vegetables, as a share of total agriculture value added	11.53	13.60	10.09	14.12
Per capita value added in agriculture, 1930	---	---	3981.91	4751.81
Distance from Mississippi	1032163.00	808239.30	1032163.00	808239.30
Distance from Atlantic	1884416.00	1418925.00	1884416.00	1418925.00
Distance from Great Lakes	1347100.00	926554.80	1347100.00	926554.80
Distance from Pacific	3686264.00	1415177.00	3686264.00	1415177.00
Annual average rainfall (inches)	36.41	13.68	36.41	13.68

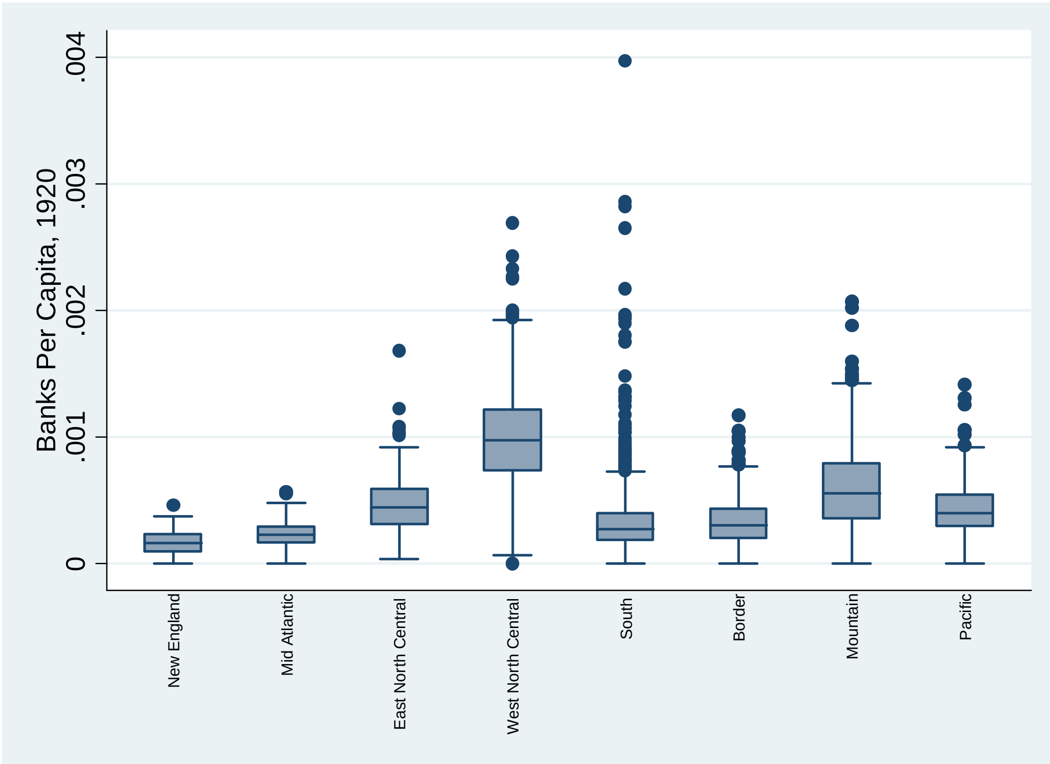
Sources and definitions in Table 1.

Figure 1: Land Concentration (Gini Coefficient), 1920.



The shaded rectangle represents the interquartile range, which contains the median—the solid line. The ends of the vertical lines extend to a maximum of 1.5 times the interquartile range. Dots beyond this range are possible outliers.

Figure 2, Banking Density, 1920.



The shaded rectangle represents the interquartile range, which contains the median—the solid line. The ends of the vertical lines extend to a maximum of 1.5 times the interquartile range. Dots beyond this range are possible outliers.

Table 3: State Level Summary Statistics

	Mean	Standard Deviation
Land Concentration	0.426	0.101
County Area (log)	7.376	0.977
Mississippi (log)	13.423	1.121
Atlantic (log)	14.011	1.198
Great Lakes (log)	13.761	1.031
Pacific (log)	14.952	0.817
Illiteracy (Fraction)	0.071	0.078
Urban (Percent)	19.011	24.833
Population Density	61.126	902.564
Population (Log)	9.761	1.0324
Black Population (Fraction)	0.117	0.194
Young Population (Fraction)	0.296	0.041
Value of Crops (Per Farm Population) (log)	6.65	0.682
Manufacturing Value Added (Per Capita)	92.901	148.94
Manufacturing Shares	0.392	0.307
Mean Rainfall	36.405	13.677

Table 4a: Banks Per Capita and Landed Interests

	(1)	(2)	(3)	(4)
Estimation	OLS	OLS	IV	IV
Dependent variable	Banks Per Capita, 1920	Banks Per Capita, 1930	Banks Per Capita, 1920	Banks Per Capita, 1920
Explanatory variables				
Land Concentration	-0.0011***	-0.0006***	-0.0046***	-0.0059***
	[0.0001]	[0.0001]	[0.0011]	[0.0016]
County Area (log)	-0.2970	-2.1456***	-1.7573	-5.6690
	[0.9740]	[0.7982]	[1.5180]	[3.2520]
Mississippi (log)	3.8700***	1.5670***	-1.6886	-0.6434
	[0.9753]	[0.5633]	[1.5067]	[1.3664]
Atlantic (log)	-0.9999	-0.1451	-11.7231***	-14.3121**
	[0.6401]	[0.4312]	[4.0130]	[5.4211]
Great Lakes (log)	4.5906***	2.9744***	8.4640***	9.9991**
	[1.2550]	[0.6877]	[2.3080]	[3.7300]
Pacific (log)	1.4919	1.6626	-4.2676	-5.496
	[1.6982]	[1.1708]	[3.2633]	[3.4881]
Illiteracy (Fraction)				38.6392
				[43.1936]
Urban (Percent)				-0.1847**
				[0.0865]
Population (Log)				8.0920*
				[4.6750]
Black Population (Fraction)				11.4796
				[9.0425]
Young Population (Fraction)				-38.1431
				[71.5380]
Observations	2908	2935	2908	2908
R-squared	0.62	0.52		

Spatially corrected standard errors in brackets. All regressions include state dummy variables.

*** significant at 10%; ** significant at 5%; *** significant at 1%**

All regressors except land concentration are scaled by 10e-05

Table 4b: First Stage Estimates for Table 4a

	(1)	(2)
Estimation	OLS [1]	OLS [2]
Dependent variable	Land Concentration	Land Concentration
Explanatory variables		
Rainfall	0.0015***	0.0011***
	[0.0004]	[0.0003]
County Area (log)	-0.0017	-0.0110**
	[0.0044]	[0.0048]
Mississippi (log)	-0.0121***	-0.0045
	[0.0040]	[0.0037]
Atlantic (log)	-0.0302***	-0.0281***
	[0.0053]	[0.0051]
Great Lakes (log)	0.0097***	0.0156***
	[0.0042]	[0.0041]
Pacific (log)	-0.0070	-0.0076
	[0.0112]	[0.0061]
Illiteracy (Fraction)		0.2515***
		[0.0820]
Urban (Percent)		0.0003***
		[0.0001]
Population Density/1000		0.0133
		[0.0916]
Population (Log)		0.0223***
		[0.0045]
Black Population (Fraction)		-0.0050
		[0.0262]
Young Population (Fraction)		0.1327
		[0.0915]
Observations	2932	2932
R-squared	0.56	0.62

Spatially corrected standard errors in brackets. All regressions include state dummy variables.

*** significant at 10%; ** significant at 5%; *** significant at 1%**

[1] First stage for Table 4a column 3

[2] First stage for Table 4a column 4

Table 5a: Robustness -- 2nd Stage Estimates

	(1)	(2)	(3)
Dependent variable	banks_1930_pop	banks_1920_area	banks_1920_pop
Explanatory variables			
Land Concentration	-0.0027***	-0.0859**	-0.0053*
	[0.0010]	[0.0414]	[0.0029]
County Area (log)	-4.0490**	-839.4690***	2.7590
	[1.7690]	[159.0810]	[4.0800]
Mississippi (log)	0.5289	26.3930	0.0699
	[1.3410]	[55.7750]	[0.2846]
Atlantic (log)	-4.5070**	-208.7870	-12.4430
	[2.6660]	[126.1510]	[8.7010]
Great Lakes (log)	3.9780***	98.7330	-8.5020
	[1.1457]	[175.2130]	[5.1010]
Pacific (log)	-2.2739	50.9780	6.6600
	[2.0936]	[107.2920]	[5.8000]
Illiteracy (Fraction)	57.5460	2601.9470*	30.4970
	[47.2584]	[1341.5350]]	[73.8560]
Urban (Percent)	-0.2461***	-0.4925	-0.2348***
	[0.0487]	[1.9740]	[0.10050]
Population (Log)	3.9240	779.1090***	5.9420
	[2.6230]	[143.3000]	[7.5160]
Black Population (Fraction)	4.8240	-422.4420	15.5110
	[7.5580]	[257.0250]	[12.3090]
Young Population (Fraction)	-96.4160***	-3308.5870**	-19.6140
	[29.658]	[1401.854]	[73.3280]
Log Value of Crops (Per Farm Emp)			2.0620 [7.0660]
Observations	2935	2908	2804

Spatially corrected standard errors in brackets. All specifications include state dummy variables.
*** significant at 10%; ** significant at 5%; *** significant at 1%**

Table 5 a: Robustness Second Stage Estimates contd.

	(4)	(5)
Dependent variable	banks_1920_pop	banks_1920_pop
Explanatory variables		
Land Concentration	**-0.0044*** **	-0.0009***
	[0.0013]	[0.0001]
County Area (log)	**-0.7813**	1.5269
	[2.8360]	[1.1940]
Mississippi (log)	**-0.2171**	3.0738***
	[1.9920]	[0.7883]
Atlantic (log)	**-10.1060** **	0.2793
	[4.4170]	[1.1850]
Great Lakes (log)	**8.1950**	1.6010
	[2.8950]	[1.1070]
Pacific (log)	**-4.2460**	0.3689
	[4.5700]	[2.3780]
Illiteracy (Fraction)	**1.2530**	-76.963-**
	[5.0614]	[15.6850]
Urban (Percent)	**-0.1921** **	-0.3612***
	[0.0702]	[0.0389]
Population (Log)	**1.5450**	-3.7660***
	[4.3620]	[1.310]
Black Population (Fraction)	**13.3840**	18.7010***
	[11.7950]	[5.5250]
Young Population (Fraction)	**56.5660**	-163.2700***
	[59.1170]	[27.9450]
Log Value of Agricultural Land (Per Acre)	**8.8160*** **	
	[2.5870]	
Observations	**2908**	2574

Spatially corrected standard errors in brackets. All specifications include state dummy variables.
*** significant at 10%; ** significant at 5%; *** significant at 1%**

Table 5b: Robustness – First stage estimates

	(1)	(2)	(3)
Dependent variable	Land Concentration	Land Concentration	Land Concentration
Explanatory variables			
Rainfall	0.0010***	0.0012***	0.0007***
	[0.0003]	[0.0002]	[0.0003]
County Area (log)	-0.0096*	-0.0097***	-0.0109***
	[0.0045]	[0.0036]	[0.0045]
Mississippi (log)	-0.002	-0.0045**	-0.0056
	[0.0041]	[0.0021]	[0.0036]
Atlantic (log)	-0.0212***	-0.0281***	-0.0279***
	[0.0051]	[0.0030]	[0.0047]
Great Lakes (log)	0.0137***	0.0162***	0.0144***
	[0.0043]	[0.0027]	[0.0038]
Pacific (log)	-0.0125	-0.0076	-0.0073
	[0.0099]	[0.0061]	[0.0089]
Illiteracy (Fraction)	0.4116***	0.2618***	0.2125***
	[0.0654]	[0.0561]	[0.0705]
Urban (Percent)	0.0004***	0.0004***	0.0003***
	[0.0001]	[0.0001]	[0.0001]
Population (Log)	0.0196***	0.0199***	0.0234***
	[0.0029]	[0.0032]	[0.0043]
Black Population (Fraction)	-0.0094	-0.0073	0.0051
	[0.0146]	[0.0157]	[0.0237]
Young Population (Fraction)	-0.1449*	0.1103	0.0810
	[0.0750]	[0.0837]	[0.1048]
Gini 1890			
Value of Crops (Per Farm Population) (log)			-0.0165***
			[0.0051]
Observations	2962	2932	2821
R-squared	0.6	0.62	0.64
Spatially corrected standard errors in brackets			
*** significant at 10%; ** significant at 5%; *** significant at 1%**			

Table 5b: Robustness – First stage estimates, cont'd.

	(4)	(5)
Dependent variable	Land Concentration	**Land Concentration**
Explanatory variables		
Rainfall	0.0011***	
	[0.0003]	
County Area (log)	-0.1255***	**0.0021**
	[0.0052]	**[0.0041]**
Mississippi (log)	-0.0046	**-0.0041**
	[0.0036]	**[0.0036]**
Atlantic (log)	-0.0282***	**-0.02069****
	[0.0050]	**[0.0036]**
Great Lakes (log)	0.0154***	**0.0209*****
	[0.0031]	**[0.0046]**
Pacific (log)	-0.0080**	**-0.0194*****
	[0.0047]	**[0.0066]**
Illiteracy (Fraction)	0.2564***	**0.1093****
	[0.0813]	**[0.0490]**
Urban (Percent)	0.0031***	**0.0006*****
	[0.0001]	**[0.0001]**
Population (Log)	0.0238	**-0.0003**
	[0.0050]	**[0.0032]**
Black Population (Fraction)	-0.0051	**-0.0169**
	[0.0261]	**[0.0143]**
Young Population (Fraction)	0.0975	**0.0538**
	[0.0909]	**[0.0667]**
Log Value of Agricultural Land (Per Acre)	-0.0041	
	[0.0049]	
Land concentration in 1890		**0.2482*****
		[0.0227]
Observations	2908	**2589**
R Squared	0.21	**0.68**
Spatially corrected standard errors in brackets		
*** significant at 10%; ** significant at 5%; *** significant at 1%**		

Table 6: National Banks, State Banks, and Land Concentration

	(1)	(2)	(3)
Dependent Variable	National Banks Per Capita, 1920	State Banks Per Capita, 1920	Share of National Banks, 1920
Explanatory Variable			
Land Concentration	-0.0019***	-0.0039***	-1.5625**
	[0.0006]	[0.0012]	[0.7510]
Observations	2908	2908	2768

Spatially corrected standard errors in brackets

*** significant at 10%; ** significant at 5%; *** significant at 1%**

All specifications include a county's distance from the Atlantic, and Pacific Oceans; the Great Lakes; the Mississippi River; county area; population; illiteracy; urban population share; young population; black population; as well as state dummies.

Table 7: Banks per capita and factors that change incentives and economic power of the landed

	(1)	(2)	(3)	(4)
Dependent variable	Banks per capita in 1920		Banks per capita in 1920	
Explanatory variables				
Small Farms	0.00006*			
	[0.00003]			
Land Concentration		-0.0044**	-0.0063***	-0.0069***
		[0.0021]	[0.0013]	[0.0028]
Land Concentration*Tenancy		-0.0106***		
		[0.0048]		
Tenancy		0.0057**		
		[0.0022]		
Tenancy, Squared		-0.0023***		
		[0.0009]		
Land Concentration* Manufacturing Shares				0.0037***
				[0.0018]
Manufacturing Shares				-0.0016***
				[0.0008]
Manufacturing Shares, Squared				-0.0002***
				[0.0001]
Land Concentration*Per Capita Man Val Add			0.0690	
			[0.0496]	
Per Capita Man Value Added			-0.0136	
			[0.0197]	
Per Capita Man Value Added, Squared			0.0006	
			[0.0024]	
Observations	2884	2908	2745	2745

All specifications include a county's distance from the Atlantic, and Pacific Oceans; the Great Lakes; the Mississippi River; county area; population; illiteracy; urban population share; young population; black population; as well as state dummies. Spatially corrected standard errors in brackets:* significant at 10%; ** significant at 5%; *** significant at 1%

Table 8: State Laws and Landed Interests

Dependent variable	Branching Permitted[1]	Branching Permitted[1]	Maximum Usury Rate, 1890	Maximum Usury Rate, 1890
Explanatory variables				
Land Concentration (Log)	-2.2563**	-2.116***	-0.019**	-0.035**
	[0.8971]	[0.7868]	(0.008)	(0.014)
Population (Log)		-0.3919*		-0.007
		[0.2100]		(0.005)
Population Density		0.3611***		-0.025**
		[0.1117]		(0.012)
Urban Population		0.176		0.159***
		[0.5340]		(0.045)
Black Population		-0.3062		0.06
		[2.0656]		0.038)
South				0.02
				(0.022)
R-squared	0.67	0.71	0.048	0.318
N	189	189	42	42

[1]Fixed Effects/Year dummies included in each specification. Standard errors clustered at the state level. Population density; Urban population and black population are all scaled by 10e-03

Table 9: Manufacturing growth and landed interests

	(1)	(2)	(3)[1]
Dependent variable	Per Capita Manufacturing Growth, 1920-1930		
Estimation	OLS	IV[2]	IV[2]
Explanatory variables			
Land concentration	-0.6246***		
	[0.2152]		
banks_1920_pop		1,392.393**	2331.1100***
		[517.5492]	[665.0449]
Observations	2397	2379	1190
R-squared	0.18		
Spatially corrected standard errors in brackets			
*** significant at 10%; ** significant at 5%; *** significant at 1%**			

[1] Observations include only all counties with above median manufacturing share in 1920
[2] Banks per capita instrumented with land concentration in 1920

All specifications include state dummies, initial log per capita manufacturing, initial log horsepower per manufacturing firm, and all previous demographic and geographic variables.

Table 10: Manufacturing Growth and Instrumented Banks per Capita over time.

Dependent variable	Per Capita Man Value Added Growth, 1930-47	Per Capita Man Value Added Growth 1947-1967	Per Capita Man Value Added Growth 1967-1982
Explanatory variable			
Banks Per Capita, 1930	2196.531**	2587.844**	657.919
	(943.967)	(1011.188)	(809.702)

All specifications include state dummies, initial log per capita manufacturing, and all previous demographic and geographic variables. **Spatially corrected standard errors in brackets: * significant at 10%; ** significant at 5%; *** significant at 1%**

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