
A Dissertation in Geography
by
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Abstract

The overwhelmingly rural “Delta” in Mississippi, Arkansas, Louisiana, and Tennessee experienced an economic revolution in agriculture during the twentieth century as a result of the shocks of the Great Depression and the rise of other national and global sources of cotton. These events led to an economic restructuring of the Delta, as that region subsequently transitioned away from hand-picked cotton, small plots of land, and tenant farming. Before 1930, most cotton farms were worked by tenant farmers or day laborers, with mules the motive power for plow and wagon. Government agricultural-support programs instigated during the Depression helped planters transition to more modern forms of farming, manifested in shifts to larger farms and adoption of mechanized equipment. Between 1930 and 1970 the comparative advantages of the Delta cotton economy disappeared as cheaper, more efficient cotton production developed in the U.S. West and Asia. By 1970, the Delta was a depopulated landscape (due to decades of outmigration by farmers and farm workers) dominated by large, mechanized commercial farms that increasingly cultivated crops other than cotton. Land use, land ownership and settlement patterns are analyzed to understand the manner and method of the rural Delta’s agricultural remaking. Historical documents (county atlases, U.S. Census records) are used in comparative and time-series analyses. Evidence suggests that external forces in national and global cotton markets, along with the resulting breakdown of local land systems of ownership, size, and parcel division affected twentieth-century economic change in the Delta: characteristics of local cotton production that served as comparative advantages of production in 1930 had become disadvantageous to cotton production by 1970. This dissertation analyzes how significantly agrarian regions experienced economic change (particularly rural-to-rural economic change) as other sources of similar crop cultivation were increasingly mechanized and globally-connected.
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Chapter 1: Introduction

Cotton production controlled virtually every facet of life in the Mississippi “Delta” South during the early twentieth century. The economic, transportation, settlement, and cultural geographies of the agrarian lands in Mississippi, Louisiana, Arkansas, and Tennessee located throughout the flat, alluvial plains on either side of the Mississippi River were arranged – however inefficiently – for the production and export of cotton. Then, a series of stark transformations occurred in this multi-state Delta region from 1930 to 1970 as a result of the economic shocks of the Great Depression and the rise of other national and global sources of cotton production, deemphasizing the historic cotton “core” (Figure 1.1). Before 1930, the Delta cotton landscape was populated by tenant farmers utilizing manual labor on small plots of land, but by 1970, mechanization, depopulation, and competition from other production areas resulted in a Delta cotton landscape dominated by large commercial farms.

This dissertation argues that the economic position of the Delta cotton region transformed from 1930 to 1970 as a reaction to economic depression and new external sources of cotton farming: local conditions that had acted as comparative advantages of cotton production before 1930 became distinct comparative disadvantages after 1930. By 1970, these comparative disadvantages of Delta cotton production had led to economic decline for many cotton belt towns, residents, and family farms, as mechanization on large farms replaced the dense rural hand-picked cotton landscape of the early twentieth century. After 1970, other source areas of efficient cotton production (particularly in the U.S. West and Asia) continued to increase their regional share of global cotton production, aiding the post-1970 economic decline of the Delta’s historic cotton core.
Figure 1.1: The Mississippi “Delta” region, divided into economic “core” and “periphery” regions in 1930 (top) and 1970 (bottom). In 1930, the riverine Delta core is dominated by cotton production. By 1970, as local cotton production lost its national and global preeminence, the Delta “core” had regressed to “periphery” status. Simultaneously, several regional urban centers and their suburbs and exurbs have replaced a Mississippi River- and Memphis-reliant cotton core.
1.1 Research Questions, and Internal and External Cotton Changes

This research broadly examines the changing landscape of cotton production in the Mississippi Delta region, and analyzes the region’s situational change from an area of comparative advantages of cotton production before 1930 to comparative disadvantages of cotton production by 1970. (For example, the Delta’s massive pool of poor cotton workers were a labor advantage in the early twentieth century, but with the advent of the mechanical cotton picker in the late 1940s, hand-picked cotton – and therefore mass labor – was unnecessary, and the masses of agrarian labor who owned or rented farms with very small acres became a disadvantage by 1970 compared to the sprawling mechanized California cotton farms.) This research can be more precisely reformulated into three specific research questions:

- How did external (non-Delta) cotton production regions develop comparative advantages of production after 1930, and how did economic changes in these external regions affect the Mississippi Delta cotton core?

- How did internal factors of Delta cotton production transition into comparative disadvantages of local cotton production?

- How did the comparative disadvantages of Delta cotton production accumulate via feedback loops to create a rural Delta in economic decline by 1970?¹

These research questions are illuminated through case studies focused on the twentieth-century greater Mississippi River Delta region, including areas within Mississippi, Louisiana, Arkansas, and Tennessee. Case studies at both wider and local

¹ An example of the accumulated comparative disadvantages leading to economic decline via feedback loops: cotton production mechanization brought loss of employment, which led to depopulation, which led to a decline in a local customer base and local taxpayer base, which led to further local economic decline in the historic cotton core.
scales will assess broad thematic approaches to a study of the Delta, including cotton production, economic development and industrialization, urbanization and population dynamics, and social factors, such as labor relations and racial systems of control or exclusion.

Because cotton production landscapes existed in other regions of the United States, corresponding analyses and case studies will be made of cotton production regions beyond the Mississippi Delta. The historic belt of cotton production has shifted westward in the United States over the last two hundred years, from the Atlantic and Southeast, to the Mississippi Delta, to Texas and Oklahoma, and to California and Arizona. Detailed comparisons of the decline and rise of these non-Delta cotton regions illuminate the factors of production – both advantages and disadvantages – that influenced Delta cotton’s rise and fall.

Likewise, cotton production has existed across the globe since antiquity, and has existed in a mass-labor agricultural system of near-industrial output since 1800. Specific changes in the history of global cotton production since 1800 will be addressed. Efficient sources of cotton production developed in Asia and Africa during the cotton Delta’s turbulent changes between 1930 and 1970. These external cotton production hearths allow for additional ancillary research inquiries, such as the degree that national-level and global-level trends in cotton production affected the Mississippi Delta region.

The purpose of this research also extends beyond a historical economic geography of the Mississippi Delta region; this research examines additional pathways of economic change in rural, agrarian regions. The Mississippi Delta before 1930 and after 1970 – the

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2 The majority of the near-tropical world engaged in cotton production in this era, but the greatest foreign producers included China, the former Soviet Union, India, Egypt, and Pakistan.
temporal bookends of this study – was an overwhelmingly rural region. Even as the region faced stark changes arising from governmental intervention during the Great Depression and World War II, the decline of hand-picked cotton, and adoption of mechanized farm equipment, the region was still rural after the landscape of traditional cotton production had disappeared. Thus, changes in the Delta represent *rural-to-rural* regional economic change, and this dissertation challenges ideas of economic development and growth that are most associated with *urbanization*; the Delta’s rural-to-rural economic changes were far removed from traditional urban-suburban models of economic change in the United States since the end of World War II.

The transformation of the cotton Delta from 1930 to 1970 is highlighted by a general pattern within cotton agricultural systems: fewer farms, fewer farmers, and larger, mechanized farms. The cotton Delta is also a study of shifting comparative advantages: many characteristics of the Mississippi Delta cotton core that were regionally beneficial towards world-leading cotton production in 1930 were disadvantages by 1970. However, these explanations are generalizations: a complex pattern of changes occurred, both in the Delta and beyond the Delta.

Throughout this study, specific statistical categorizations and thematic trends of production in the Delta, in other U.S. cotton cores, and in global cotton production regions will be addressed. A matrix of these local, national, and global changes in cotton production presents this complexity (Figures 1.2 and 1.3). Trends at the national and global level (bale yields, cotton gins, the location of an American cotton core, mechanization, market price, competition, and global producers) influenced the Delta within a variety of different sectors related to the cotton economy (land tenure, land size,
transportation, population and demography, local intervention by State and Federal
governments, environment, labor, and race.) Each matrix will be used throughout this
dissertation as a space-time “roadmap” to better explain the change experienced by the
twentieth-century cotton Delta region. Particular emphasis will be placed on changes
brought by Depression, World War II, and mechanization of cotton farm equipment
(including the mechanical cotton picker).

Other analyses of the broad changes in Delta cotton production are seen in a
general timeline of the Delta cotton landscape (Figure 1.4). A timeline organizes the
general waves of change in the Delta: note the cluster of rapidly-occurring “break points”
near 1930 and near 1970. Depression-led breaking points near 1930 signaled a beginning
to regional production changes, and the breaking points near 1970 signaled a permanent
end to traditional hand-picked mass-labor cotton production.

These organizational approaches to understanding changes in cotton production
are evident in the structure of this research. Chapter 2 examines the westward shift of
U.S. cotton production since 1800, as the focus of production slowly moved from the
Atlantic Southeast (Georgia, South Carolina, Alabama) to the Mississippi Delta by 1900.
After 1930, the rise of additional cotton fields in Texas and Oklahoma, as well as the
eventual dominance of far western production in California and Arizona were due to
comparative advantages of production in those places. Similarly, an increase in low-cost
foreign cotton by 1970 deemphasized Delta cotton production. This de-emphasis arose
from the external factors discussed in Chapter 2, but also from the internal factors of
Delta cotton production discussed in Chapter 3. The Mississippi Delta cotton landscape’s
factors of production in 1930, including farm tenancy, (and the land parcelization
Figure 1.2: National and global cotton trends, 1930-1970.

Figure 1.3: Local cotton trends, 1930-1970.
### Before era of cotton transformations
- 1840s: Whites begin to settle in the Delta
- 1855: Civil War ends
- 1880s: Widespread draining of Delta swamps
- 1894: Cotton prices at 19th-century floor
- 1896: *Plessy v. Ferguson* legalizes segregation
- 1910s: Boll weevil infestation covers Delta
- 1910: Legal convict-lease system begins to disappear from Delta
- 1920s: Cotton price fluctuations
- 1927: Great Mississippi River Flood

### Wartime-era transformations
- 1942: World War II brings 2.8 billion dollars of Federal investment to the South
- 1944: First mechanically picked cotton crop
- 1944: *Smith v. Allwright* outlaws “white primary”
- 1944: Mississippi Agriculture and Industrial Board
- 1946: Beginning of highest Delta outmigration period
- 1948: International Harvester mass produced picker

### Mechanization-era transformations
- 1952: 10% of Delta cotton is machine-picked
- 1954: *Brown v. Topeka Board of Education*
- 1955: End of highest Delta outmigration period
- 1955: Arkansas Industrial Development Commission
- 1957: Machine-picked Delta cotton costs less than hand-picked cotton costs
- 1960: 50% of Delta cotton is machine-picked
- 1963: Louisiana’s Atchafalaya River channelization complete
- 1964: *Reynolds v. Sims* broke the power of rural political districts

### Depression-era transformations
- 1932: TVA established
- 1934: Rural Electrification Administration
- 1934: All Delta states have enacted income taxes
- 1934: Southern Tenant Farmer’s Union
- 1936: Mississippi’s “Balance Agriculture With Industry” program established
- 1938: one Tennessee “plantation” cotton gin
- 1940: Mississippi: 85% of hired cotton farm workers are day-contract laborers
- 1940: Mississippi and Arkansas lose 32% of manufacturers compared to 1930 (US loses only 5%)

### Endpoints of transformations
- 1970: 100% of Delta cotton is machine-picked
- 1970: Delta cotton tenancy rate at 25%
- 1970: Arkansas reaches 50% urban, Mississippi 44% urban
- 1970: Soybean production dwarfs cotton production
- 1971: Kerr-McClellan navigation system on Arkansas River complete

**Figure 1.4:** Timeline of cotton changes in the Delta. Note the cluster of rapidly-occurring “break points” near 1930 and near 1970. Depression-led breaking points near 1930 signaled a beginning to regional production changes, and the breaking points near 1970 signaled a permanent end to traditional cotton production.
associated with tenant farming), environmental challenges, and a regional delay in mechanization served as comparative disadvantages of production: western U.S. farms from Texas to California possessed fewer tenant farms and more machines to harvest cotton more efficiently.

Economic development and manufacturing, while increasing throughout many “Sun Belt” states after World War II, primarily occurred in Delta states within the non-cotton regions. Chapter 4 focuses on this economic growth, particularly the government-funded or government-contracted defense plants built in World War II, which galvanized various growth poles in historically peripheral regions. New inflows of labor and capital to the growing non-cotton towns arrived from the increasingly economically devastated cotton belt. Cotton production, however, benefited greatly (for the few farmers who could produce profitable cotton) because of the actions of the federal government in agriculture related to the Great Depression. State intervention in cotton agriculture, from direct relief to market-manipulating subsidies, continued throughout the twentieth century.

Consequently, the decline of early-twentieth-century modes of cotton production led to an excess of (now former) agrarian labor. Hundreds of thousands of rural residents emigrated out of the Delta South entirely during the 1940s and 1950s. Chapter 5 profiles the cumulative effects of multiple waves of migrants who arrived in nearby non-cotton places as new migrants aided those towns’ growth, to the detriment of the historic cotton-focused settlements, such as the “cotton gin town”. Nascent urban systems beyond the cotton belt increasingly served as growth nodes for proliferating economic development in the 1950s and 1960s. The widely dispersed population of the cotton core, along with a
corresponding oversaturation of commercial market functions in many cotton towns, served as systemic disadvantages hindering cotton belt urbanization.

As the cotton belt’s now-oversupply of labor left the core cotton region entirely, social systems of often race-based control collapsed, occurring simultaneously with the breakdown of historic controls including pre-modern credit systems. Waves of labor revolutions were coupled with the decline of political power of rural electoral districts during the 1960s. Both historic systems of economic power relationships and the resulting social changes are examined in Chapter 6. The concluding chapter addresses the economic divide in the Delta that existed by 1970 – an economic divide that continues to the present, as nearby once-rural non-cotton regions in the Delta states are economically thriving, while the still-rural core regions of the historic cotton belt are dying.

1.2 Research Choices, Geographic Parameters, Limits

The primary organizational research decisions for this study are worthy of additional explanation. While this research argues a cluster of events near 1930 and 1970 serve as starting and ending points of widespread cotton changes, an exact 1930 to 1970 calendar year period is not perfect: the 1927 flooding of the Mississippi River was the most devastating natural disaster in the region’s history, and scholars such as Aiken defined the end of the historic twentieth-century plantation era at about 1965. Yet, the rapid cluster near 1930 is an effective moment of change, as it was the Great Depression that ultimately made over the landscape of the cotton South.3

The choice of the Mississippi Delta cotton region as a focus area, rather than a similarly declining Atlantic Southeast cotton region, highlights a Delta region that took on distinctive spatial and economic forms from the late nineteenth century. While the Southeast cotton landscape dates from immediately before 1800, the core Mississippi Delta cotton landscape did not exist until the swampy bottomlands of the “Delta” region of northwest Mississippi and east Arkansas were drained and cleared in the 1880s. With a few exceptions (such as the area near Natchez and Vicksburg), the “Delta” cotton production region is a post-slavery cotton landscape.

A fundamental difference between areas with and without historic slave ownership exists in each region’s organization of crop plantings, land parcelization, labor contracts, and so forth. Similarly, the cotton agriculture west of the Delta avoided the system of small-farm tenancy that eventually existed as a comparative disadvantage of production for the Delta after 1930 (as the small farms and manual-labor focus of Delta tenant farms resulted in lower yields and more expensive harvests than the non-tenant farming West). Simply put, the “starting point” for Delta cotton agriculture is neither a family farm, nor an ex-slave plantation; rather, it is a small tenant farming system. The greater multi-state Mississippi Delta region is an appropriate geography to conduct various multi-scalar case studies analyzing the rural-to-rural pathways to economic development. In addition to representing the most productive cotton belt in America during the early and mid-twentieth century, the region has also experienced massive waves of rural-based transformations, including the development of micropolitan urbanization and the rapid depopulation of agrarian labor.
In order to conduct methodologically sound case studies, several geographic parameters must be defined, and computer-aided geographical software known as geographic information systems (“GIS”) must be assessed for possible limitations. First, “the South” refers to the southern states of the United States that seceded from the Union during the Civil War Era, unless explicitly noted. The “Delta” states identify the states comprising the Lower Mississippi River Valley – Mississippi, Louisiana, Arkansas, and Tennessee. A colloquial “Delta” also exists: the wide swaths of land roughly 100 miles east and west of the Mississippi River throughout Tennessee, Mississippi, Louisiana, and Arkansas compose a region simultaneously defined as the “Mississippi Alluvial Plain”, “Mississippi River Floodplain”, or “Mississippi Embayment”. This alluvial plain can be divided into local subunits of various “Deltas”, such as the “Mississippi Delta” or “Yazoo Delta” between the Yazoo and Mississippi Rivers in northwestern Mississippi, or the “Arkansas Delta” in the eastern third of the state. The widest definition of the inland alluvial plain is often referred to as the “Delta” in informal and academic conversation.4

Because high-volume cotton production existed throughout the South over many centuries, and because modern American cotton production eventually spread westward from the Mississippi River, a map of an anachronistic “cotton core” might stretch from coast to coast, far beyond a supposed cotton “South.” 5 A clear spatio-temporal pattern of cotton production can be generalized. The cotton economy of the early American Republic was strongest in the near-Atlantic South. The cotton economy of the

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4 It is not the physiographic delta at the Mississippi River’s mouth in the Gulf of Mexico. Many local features and businesses bear the name “Delta” (Delta National Forest, Delta Plastics, etc.)

5 The strength of cotton production in early twentieth-century Oklahoma is seen by the creation of “Cotton County”, with the voter-approved name symbolizing the primary crop of the region, in 1912. Cotton County is located along Oklahoma’s southernmost border with Texas. The location of the “Cotton Bowl” sports arena in Dallas, Texas also signals that broader region.
antebellum and Civil War generation was strongest from South Carolina to the east-central Alabama “Black Belt” of fertile soils. The cotton economy from the late nineteenth century to post-World War II was strongest in the Mississippi River borderlands. The most recent American cotton economy survives from Texas westward to California. While patches of cultivation existed in other regions in specific decades, this generalized pattern is reliable. “Cotton South” refers to the twentieth-century highly productive cotton counties in the Delta states that align with the near-Mississippi-River alluvial Delta region in Mississippi, Louisiana, Arkansas, and Tennessee, unless noted.

State and sub-state regions in the Delta experienced different historical patterns of settlement, resulting in some distinct locations and extents of the Delta’s economic peripheries and cores within each state. This differentiation resulted in a Delta “core” that cannot be generalized as a symmetrical riverbank zone of a certain distance east and west of the Mississippi River as a result of a GIS buffering function; local topography, historical settlement and agricultural patterns ultimately determined this Delta core. 6

Immediately encircling the Delta cotton core and non-cotton periphery, an additional concentric belt exists where other twentieth-century economic growth zones developed, including an oil belt in Oklahoma and Texas, and the steel industry in central Alabama. While these economic areas are regionally important, they are far less interdependent with the non-cotton Delta periphery than the core Delta cotton belt. Accordingly, a partially inward-looking geographical focus of the settlement and commerce extending from the Mississippi River axis is appropriate for these case studies.

6 A buffer function in GIS software produces an areal unit whose boundary is equidistant (at a user-defined distance) from all points of an input data point/line/polygon. For example, a 20-mile buffer around “Manhattan Island” would produce a larger surrounding polygon that included parts of New York (including much of Long Island), Connecticut, and New Jersey.
Geographical information systems (GIS) allow for multi-scalar analysis of trends and scholarship in the digital humanities have recently embraced what has now become known as Historical GIS, or HGIS. However, the ability to easily store, manipulate, and map county-level data, the ability to digitize and georeference historical records, and the ability to easily deduce patterns at multiple scales throughout the Delta are diminished without understanding specific weaknesses and potential challenges with current GIS software. Merging historical scholarship with GIS tools can be problematic, because of a lack of surviving historical records, in quantity or in quality: historical data availability in Southern courthouses has been difficult since the Civil War era. Several types of spatial data are used in this study of the Delta, including some digitized land parcel maps.

However, some basic GIS solutions would be unworkable based on existing historical datasets. Calculations using the 1910s-era road network would be hard to compile, as no reliable statewide maps of historical roads exist for Delta states until the 1920s. Accurate land parcel maps and historical plat books are hard to come by: many regions within the study area are missing these historical maps. Historical road GIS layers will have to be extrapolated, generalized, or avoided in certain temporal-era maps altogether. Additionally, individual cotton gin town morphologies draw on Sanborn Fire Insurance company maps and other related sources, yet these give only urban indicators of street networks, lacking any comprehensive county- or state-wide view.

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7 By May 2011, the Arkansas State Land Commissioner’s office was missing 23 of the 85 plat books the office was purported to own; many of these documents changed hands between state and county officials over decades without proper documentation of transfers. Sider (2011).
8 A specific problem encountered in Delta research concerns georeferencing historical land parcel maps, because of the complications arising from the historical Mississippi River itself. Like any large moving body of water, the entire pathway of the Mississippi continues to change, while political borders between Arkansas and Louisiana on the west, and Tennessee and Mississippi on the east are assumed to be static. In the early twentieth century, these states agreed on a permanent state border regardless of massive riverine avulsions. Thus, there are many parcels of land along the Mississippi (and other large rivers) where a state
Data representation of migration is problematic, including representation of the late-1940s/early-1950s rural-to-urban (or at least rural-to-town) exodus of former plantation workers leaving the cotton belt. How should such migratory patterns be visualized, when dealing with mass population data as well as individual vignettes of migration tracking an individual’s life-world movements? Additionally, the problem of “sample data” exists. Geography is a discipline that typically desires complete coverage of continuous data. This coverage problem is magnified with discrete datasets often used in historical records, where much research is made from sample datasets that may or may not be adequately representative data.

1.3 Rurality and the Cotton Plantation

A distinct geography of ruralism persisted until the mid-twentieth century in the Mississippi Delta cotton plantation regions. The terms “ruralism” and “rurality” refer not only to quantitative measures of low population density in comparison to urban places; rather, “rurality” also refers to a broad set of interactions, lifestyles, and spatial connections that characterize life in agricultural (or merely non-metropolitan) areas.

Barron examined the economic, cultural, and social transformations of the rural north in the late nineteenth and early twentieth centuries, amidst tension of small business against on the opposite bank claims opposing land as its own. This created an issue for my digitization and georeferencing, since historical records and maps from rural counties in the early twentieth century are demarcated with the Mississippi River as it was 90 years ago, not as it is today. Overlay functions are best appropriate for analyses between these temporal data sets.

Tracking individual migration has led to new approaches within time geography (see Kwan, 2004; after Odland, 1998). These approaches are limited when charting multi-year migrations of half a million people, inviting questions of base migratory units (county or state), cartographic decisions (usage of linear connectors to show strict county movements, or usage of a series of arrows representing dynamic flow maps in the style of Borden Dent), and intrastate migration.

Barron (1997) used dozens of traditionally rural counties across several states. The problem with this approach is geographical: among the many counties examined, Barron includes one county in central Kansas but eight in central Iowa; 14 counties in Indiana but none in Missouri; 21 counties in New York state but just two in Pennsylvania. See Barron, p. 2-5.
growing corporations, the rise of consumerism to rural regions through mail-order
catalogs, and the growth of civic and political organizations in rural places.\textsuperscript{11}

Hudson’s studies of the Midwest outlined how government and capital combined
within a gridded cadastral system (the township and range system) and railway
transportation system to promote a very productive agricultural landscape.\textsuperscript{12} And
“rurality” in the South is not homogeneous: Tidewater Virginia eventually became a
region based on wheat production rather than tobacco. The cotton landscape of the
Piedmont southeast was joined by industrialization as cotton and textile mills shifted
south from New England. But the Delta region stayed overwhelmingly rural, unchanged
in comparison to these many other rural regions beyond.

There are several defined elements of rurality in the Delta: plantation landscapes
with on-site commissaries that function as office, post office and bank; a dense level of
agrarian population due to the small average parcel size (and small active-farmland size)
in the region; agribusiness complexes located near railroad lines in a smattering of small
towns.\textsuperscript{13} The rural world is one of low population and low population density, but it is
also based on infrastructure, linkages, and economies.\textsuperscript{14} The extent to which this rural
landscape persisted to 1970 and beyond, and how components of this rural landscape
have changed (through shifts in land division, ownership, or use), are highlighted in this
research.\textsuperscript{15}

\textsuperscript{11} See Barron (1997).
\textsuperscript{12} See Hudson (1985).
\textsuperscript{13} On-site commissaries existed on about 25\% of all cotton plantation complexes. Aiken (2010), p. 130.
\textsuperscript{14} In contrast to the image of North Dakota or Kansas homesteading where the base geography is a gridded
landscape of 320, 160, or 80 acres, there exists in the cotton Delta a denser pattern of land ownership, and
clusters of settlement, than the Kansas wheat fields. However, the Delta’s relative agrarian density, from
the Louisiana “long lot” system to the bottomlands of east Arkansas, fails to translate into more urbanity.
\textsuperscript{15} Statistical definitions of population “rurality” differ from a quantitative point of view; different measures
are kept by the U.S. Department of Agriculture and the Census Bureau.
Urbanity, by comparison, is a measure not only of population but also of urban infrastructure, including the presence or absence of railroad linkages, legally incorporated towns, a high number of banks, or a high number of square footage of major buildings or downtown districts. No single one of these measures is equivalent to an “urban” label: a 1920s Sanborn Fire Insurance map that measures a Delta Louisiana parish courthouse with an area of 25,000 square feet is not an automatic verification of urban status. Instead, urbanity possesses a series of combined layers of concentrated and developed nodes of settlement. Furthermore, viewing population-as-urbanity fails to consider that, within the cotton Delta, places of not-insignificant population density exist, but these places are neither drivers nor recipients of economic and urban growth. This research suggests there were spatial settlement components to the Delta’s economic situation (specifically, the layout of the plantation), and many of these spatial characteristics of the typical Delta plantation extant in 1930 were related to the inefficiencies of Mississippi Delta cotton production detailed in Chapter 3.

In general, the spatial model of cotton farming that increased in number after the Depression (and that saturated the Delta by 1970) was the replacement of a dense, widespread rural settlement pattern dominated by tenant farmers with a more “nucleated” settlement pattern, with extensive clustering of homes near major transportation routes. But the spatial layout of the plantation that dominated the Delta in 1930 must also be addressed. Aiken noted that large-scale plantation complexes that dominated the South from the Civil War to the Great Depression usually included a number of buildings (both
on- and off-site) that were extended communities, including schools, churches, stores, cotton gins, barns, headquarters or business offices, and tenant farm houses.\textsuperscript{16}

A modern spatial model, one that developed in the tumultuous years of the Great Depression, was the “neoplantation”, first identified by Prunty in 1955. (As a pure economic definition, a “plantation” has a nebulous meaning within a global context, describing ventures as diverse as human settlement and managed forestry, though this work will refer to “plantation” as a large-scale farming complex devoted to usually one exportable cash crop.\textsuperscript{17}) This “revolution in plantations” noted by Prunty was defined by the increasing importance of chemicals and machines over hand-picked cotton laborer input. This modern form of the plantation exhibited a particular suite of traits, identified by Aiken, including the use of mechanized farm equipment (including tractors), chemical fertilizers, and wage labor (“a labor force paid by the day or week” instead of the annual contracts of tenant farmers.)\textsuperscript{18} One specific aspect of the changing spatial model of large cotton farms was the degree of separate, noncontiguous land parcels owned by the same legal landowner, or “fragmentation.” Prunty explained fragmentation as a process where “each [noncontiguous land parcel] of which is smaller than minimum plantation size but which in sum greatly exceed it, and which are centrally managed.”\textsuperscript{19}

Fragmented neoplantations were affected by the economies of scale required to earn a profit in an era of capital-intensive investment for mechanized equipment and fertilizers, but these discontiguous landholdings were also affected by federal regulations governing the “allotment” of crops (modern “crop bases”) that could be planted on a

\textsuperscript{16} Aiken (2010), pp. 130, 134.
\textsuperscript{17} Plantation agriculture also had roots in various Western European mass-labor spatial forms in the 11th and 12th centuries. See Aiken (2010), p. 115.
\textsuperscript{18} See Prunty (1955), Aiken (2010), p. 133.
particular parcel. In such cases, additional cotton allotments occurred on land rented from other farmers. A 1970 study by Aiken of the in-Delta Tate County, Mississippi region determined the following measures of fragmented parcelization for a 3,500-acre cumulative holding by the Presley family: 750 acres on four farms were directly owned; an additional 15 farms were rented, and an additional six tracts of cotton “allotments” were rented; the total labor force included one manager and five “machinery operators”; and, perhaps most important, the 500 acres of dedicated cotton fields were outnumbered by the 600 acres of soybean production. By 1970, fragmentation had occurred within a decreasingly cotton-dependent landscape.\(^{20}\) And after 1970, the new, often fragmented, but large Southern “mega-farms” were described by Aiken as “becoming more similar to the irrigated areas of the West.”\(^{21}\)

In a larger sense, the plantation landscape possessed several systemic disadvantages for potential urbanization. Ex-plantation landscapes did not necessarily have an existing urban network of supporting towns and villages (due to many commercial functions being performed on-site at or near a plantation), or a dense network of railroad refueling stops (due to an increasingly sparse network of Delta railroads.) An effect of plantation-linking railroads (and later highways), when combined with the high amount of banks in very small Delta towns was a Delta landscape that was oversaturated with too many supposed top-level hierarchical nodes.

A 1950 examination of “distance to closet trading center” – the market visited most frequently – presents evidence that suggests this oversaturation in Mississippi. In the Delta heartland in northwest Mississippi, the average distance to a commercial

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\(^{21}\) Aiken (2010), p. 140.
trading center in 1950 was very low, meaning that a wide agrarian population had many nodes of market centers or “trading centers” to visit within a particular county. Because of this oversaturation of market centers, one individual market would rarely develop into a larger urban place. (The example of Tallahatchie County, Mississippi between 1930 and 1970 identifies this phenomenon. During those decades, the western half of Tallahatchie County contained a cluster of three small towns around 1,000 persons each within five miles of one another, instead of developing a single town in western Tallahatchie County with population around 3,000 persons.) Other environmental explanations for a comparatively higher degree of rurality exist. The Delta also possessed an oversaturation of commercial market functions, specifically “too many” individual service firms including banks and cotton gins. In addition, the Delta was at a demographic disadvantage for potential high rates of population increases. The vast majority of foreign-born immigration to the United States in the late nineteenth and early twentieth centuries resided in Northern states, not Southern states. Northern states were beneficiaries of larger labor pools of potential skilled workers. The Delta lacked an existing urban base, possessing just one very large city – Memphis, Tennessee – and it was just the 32nd largest city in the United States in 1940, smaller than cities without a national standing at the time such as Rochester, New York or Columbus, Ohio.

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22 Only the remnants of the Black Belt, in northeast Mississippi, come close to the Delta’s measures. For specific “distance to closest trading center” measures, see “Mississippi”, 1950 U.S. Census of Agriculture.
23 Helms (2000) argued that the general lack of continuous cultivation on Southern farms (compared to the higher areas of cultivation per farm in the Midwest) influenced the total supportable rural population. Helms found comparative population densities in 1860 of 17.3 rural persons per square mile in selected Southern states compared to 37.5 rural persons per square mile in selected Ohio River Valley states. This argument is important, but by 1930 a denser layer of post-Civil War “rural” populations inhabited the Delta. See Helms (2000), p. 728.
1.4 Significance and Method

General pathways towards rural-based economic growth and regional development in overwhelmingly agrarian or rural regions are addressed, as rural-based or micropolitan-based economic transformations have remained largely unexplained in academic scholarship.\(^{24}\) This work helps explain the spatial history of economic development in overwhelmingly rural regions. While much has been written about the newest “New South”, the late-twentieth-century phase (particularly from the 1970s onward) delineating the broad shift of populations and corporate investment economies from the rustbelt Northeast to the Sunbelt South, this research analyzes the “Delta” region of the Lower Mississippi River Valley and its once dominant cotton economy. Major significance of this work arises from a study of rural-to-rural change, as well as rural-based economic change in a Southern context. While the basic settlement patterns of the cotton core region remained “rural”, a massive economic restructuring took place in the region, resulting in wider changes in cotton agriculture.

In my master’s thesis, I focused on the timing of and causes of the remarkable post-1970s growth in the microregion of an urbanizing northwest Arkansas, a transformation largely associated with the economic development of Wal-Mart and Tyson Foods as national Fortune 500 corporate powerhouses.\(^{25}\) That study argued it was not the role of interstate connectedness that triggered growth, nor was it any sort of federal stimulus or defense industry locations. Rather, an array of forces aligned to allow such growth. These forces included the business decisions to keep corporate

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\(^{24}\) One element of successful economic development entailed government intervention in industry in the 1940s. Such studies of government “stimuli” are important as the nation debates the role, successes, failures, and possible sequels to the 2008-2010 phases of fiscal “stimulus” by the Federal government.

\(^{25}\) Hagge (2009).
headquarters in northwest Arkansas (retaining a white-collar tax base and consumer class in the region), the nearby location of universities (supplying a pipeline of graduates entering management at local corporations), and the influx of tens of thousands of Latino immigrants as employees for Tyson Foods (greatly increasing local populations, school sizes, customer bases.) This work partly comes out of that set of insights, at a different thematic (and larger geographic) scale. Earlier transformations were at work across the entire Delta region that were harbingers of the decidedly modern landscape of the Wal-Mart era. Discovery of the processes happening before the contemporary “New South” era of the 1970s that apparently re-allocated and reorganized the historical agrarian makeup of Southern landscapes is essential.

Existing geographic narratives of an economically transforming ex-plantation South are too often discussed at the mega-urban scale, focusing on the growth and urban agglomeration of extremely populous Southern cities such as Atlanta, Charlotte, or Nashville.\(^{26}\) The limitation with such theorizing is clear: these Southern metropolises were already large, populous, dense commercial centers in the prewar 1940s era, so these postwar urban booms were transforming such cities with a quarter-million residents into cities with half a million residents – a transition of the degree of “metropolis” instead of a transition of mostly rural regions becoming urban.

This urban-to-more-urban path is not geographically dependent to the ex-plantation South’s specific land parcel arrangement or landscapes. Rather, city-focused paths of regional change can be partially generalized as the story of Midwestern American urban development merely occurring a few decades later, where the quantitative measures of urban growth and maturity of 1960s-1970s Atlanta or Charlotte

\(^{26}\) See Biles (1986) and Rushing (2009).
are somewhat interchangeable with 1940s-1950s Omaha or Indianapolis. Ignoring Southern rural geographies discounts overwhelming legacies of various plantation landscapes, including social and racial effects. Accordingly, the Delta cotton district’s rural-based transformation was distinctly different from the urban growth of a generic Southern city that originally matured due to its locational attributes as a port (Charleston, South Carolina), rail depot (Atlanta, Georgia), government center (Richmond, Virginia) or industrial hearth (Birmingham, Alabama).

Rural transformations are additionally important because of the particular geographies associated with urban ancillaries of the historical Southern cotton plantation: beyond the plantation, there existed “cotton gin towns”, small commissary-based or market-based towns, often located along plantation-linking transportation routes. These beyond-the-plantation “urban” places were paradoxically predominantly rural or “micropolitan” (small-to-mid-sized-town based.) By assuming cotton’s preeminent role in the making of Delta landscapes, academic scholarship must summarily address these predominantly rural traits of local urban systems.

Additional problems persist with existing historical narratives of the mid-twentieth-century Delta. None of these works has attempted to synthesize the entire mid-century period as the collective processes of massive regional change, instead focusing on one or two particular themes. In addition, these works generally avoid geographic analyses of specific changes in settlement patterns. The population transition to the modern Delta involved multipolar agglomeration via urbanization, as the landscape of hundreds of scattered villages gradually centered on dozens of larger towns. Geographic

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27 While particularistic cultural differences exist for each city, broad views of population growth would label the above as “postwar growth” typical of 1950s-1960s urbanization trends.
dimensions of these population shifts are largely unexplored, yet these changes played crucial roles in the periphery-to-core transition of non-cotton areas.

The economic transition of the multi-state Mississippi Delta region from 1930 to 1970 was a complex process, including aspects of urbanization, agricultural improvements, and activist federal governmental presence. This work is more than a history of Delta transitions. Rather, it offers a comprehensive geography of the economic situation of the Delta: a study of changes in regional agriculture and urban decline, coupled with a study of rural-based economic and population growth in spatially surrounding areas. Historical linkages to contemporary scholarship on federal stimulus, rural-based economic growth, land parcel inefficiencies, and core-and-periphery development, make this dissertation an important addition to the field of historical geography.

Methodological objectives center on tracking and visualizing the regional economic transformation of the rural cotton Delta, including investigations of census data, financial reports, land records, agricultural records, and town plans. These transformations, including migrations, changing urban morphologies, land ownership transfers, and mechanization of agriculture, are occurring at various scales. Other examples of changing rural geographies around the nation and world are referenced, as analyses of such linkages are important in this era of globalization.

This research argues that the traditional rural cotton Delta of 1930, once possessing dominant comparative advantages of cotton production, was faced with several seminal structural events from the Great Depression (and later, World War II). As other national and global regions of cotton production flourished after 1930, the
characteristics of Delta cotton production that had once enabled nationally-leading cotton production (for example, low costs of labor for landowners through the “rental” system of tenant farming where tenants provided their own physical labor) became comparative disadvantages (for example, tenancy was comparatively inefficient to the largely tenant-less mechanizing cotton fields of California, who could afford to experiment and invest with machines on enormous plots of land due to economies of scale). By 1970, the Delta was fundamentally transformed into a world of deemphasized cotton production that had permanently left the dense rural tenant farming system of cotton production behind.

The aim of this work is to investigate the wider regional change and economic development (and stagnation) associated with rural-to-rural economic change, illuminated by a comprehensive case study of the multi-state Mississippi Delta region and its twentieth-century economic transformations and demographic changes from 1930 to 1970. Analyses include mapping, quantifying, and explaining several specific geographic mechanisms, both in the Delta and beyond, that influenced and fostered the region’s economic changes as the Delta after 1930 became a place disadvantageous to continued profitable cotton production.

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28 1930-1970 serves as an effective temporal band for longer trends, some maturing and some emerging. 1930 was a moment of radical economic change, as the looming Great Depression, the recent 1927 Mississippi River flood, Delta state budget defaults in the early 1930s, and a collapse of cotton prices all coalesce at this moment. 1970 bookends the near-total mechanization of cotton, the realization of the legal underpinnings of the Civil Rights Movement, and the endpoint for mid-century population changes, as Delta state depopulations “recovered” by 1970. Most Southern urban areas by 1970 exhibited “typical” American post-World War II suburbanization patterns, and were increasingly served by large-scale infrastructure development such as interstate highway creation or river damming.
1.5 Writing the Delta Landscape

Conceptually, Southern or Delta regional economic development have been approached within academic geography, but these works collectively suffer from some overriding shortcomings. Existing works often fail to acknowledge strong rural-based paths to development, and fail to move past the stereotype of ex-plantation-as-forever-ruined (and therefore beyond the possibility of economic growth). I aim to unite the challenges (and limited success) of changing ex-plantation landscapes with the successful economic changes of nearby rural geographies, illuminated by a detailing of the inputs and eventual results place-specific to the Lower Mississippi River Valley “Delta” region.

The beginning point for understanding twentieth-century agrarian economic changes and industrialization within the cotton world of the Delta (and the wider American South) is Charles Aiken’s (1998) seminal work. One of Aiken’s arguments is that the cotton plantation South was merely an extension of a similar type of agricultural system established by Europeans in Latin America and Africa. Aiken limits his study area by geography, identifying the historical rural cotton core of selected counties within three states without any corresponding urban linkages, largely ignoring the Mississippi Delta core. 29 This is insufficient for studying larger theories of economic growth, which require an acknowledgement of the geographical interdependence of places. 30

Schulman’s (1991) approach to Southern rural economic change, focusing heavily on government involvement in funding and inputs for defense industry, manufacturing, and social welfare programs. Such governmental actions are inputs for economic growth 29 Including the most productive cotton plantation belts in Mississippi, Alabama, and Georgia. 30 Aiken’s Black Belt counties of Alabama cannot be adequately explained without understanding the regional economic and residential changes in nearby Birmingham. I will rectify this problem of rurality-in-a-vacuum, by including linkages of urban Memphis in my examination of nearby rural cotton lands.
in the South, with funding or programs directed to the South via the region’s powerful, entrenched Washington presence. His history is a worthy piece of scholarship of general “Southern” growth, yet Schulman avoids the geographical distinctions of Aiken’s plantation studies.

Theoretical underpinnings of “Southern” and therefore “Delta” changes as *distinct* from Northern urban and economic changes are debatable. A historical view is that of Capers (1966), who described a “rural lag” in Southern development. Urban migration in the South was composed of native rural Southerners, in direct contrast to the North, which was fueled by a largely urban European immigrant class during the late nineteenth and early twentieth centuries. Doyle (1990) examined the urban growth of Charleston, Mobile, Atlanta, and Nashville, theorizing that differing urbanization paths were explained by degrees of traditionalistic cultural views in each city’s residents, far more than spatial connections or locational geographies. Goldfield (1982) described the South’s economic state as defined by a history of rurality, race, and external investment capital (from Northern cities.) Biles (1986) summarized additional theories of Southern urbanization, but concluded that Memphis’ eventual urban growth was not an outcome of New Deal-era federal investment. Rather, the wartime industrialization of defense firms combined with postwar political reform led Memphis towards a more urban future.

Too often, U.S. South-oriented examinations of ex-plantation and city-focused economic shifts take a decidedly later temporal frame. Falk and Lyson (1988) describe the recent economic change of the South as a pivot of rurality and industry *during* the 1970s. I argue that a mature economic micropolitan urban system in the Delta had been reached by the 1970s, with any later developments merely refining a mature urban

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system, agricultural hierarchy, and industrial base. Other studies of Southern economic change seem to categorize similar concepts such as “economic modernity” as a post-1970 issue, though these works overemphasize rising income levels as expressions of real economic change, and fail to define the problematic term “modernity” convincingly.

Additional rural-to-rural models of development (with or without agriculture as an economic base) are seen by Ranis and Stewart (1993). Further explanations for rural-based economic change are illuminated in the histories of political and social organizations in the ex-plantation lands, including the Southern Tenant Farmer’s Union in the 1930s.32 Wider lenses discuss emergent moves towards economic transformations and industrial change in the Appalachian South, including the federal governmental interventions in southeastern states via the Tennessee Valley Authority.33

Barron (1997) details the transition to mature economic systems and regional transformations in the agrarian North. This Northern rural transformation was an era that saw the hearty, individualistic, localism-focused North transform into a world that Barron describes as “characterized by the centralization of the economy, the expansion of state power and professional expertise, and the rise of an urban consumer culture…”34 Barron’s work focuses on the process-based evidence of northern regional change: educational reform, farmer organizations, consumer culture, and various innovations, by analyzing counties in the Midwest and Northeast that experienced a great transformation out of an unorganized, rural state in 1870. I take issue with Barron’s explanatory arguments that transformation in the North appears as a process of organizations, political movements, civic pride, and mass consumer trends. While important, such process-based

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32 For a detailed history of this union, see Grubbs (2000).
33 See Branscome (1977) for Federal investment in Appalachia, including an overview of the TVA.
analysis does not entirely explain the genesis of such broad outputs or organizations without analysis at the individual or local scale.

Similar scholarly explanations for agrarian change exist for the U.S. Great Plains. Sylvester (2009) exposed the changing agricultural structure of rural Kansas agriculture, suggesting that crop diversity (as opposed to monoculture wheat) was more prevalent in the 1930s than previously theorized. The implications of this work have affected my own research in the Mississippi Delta, as my temporal era (1930-1970) saw a massive shift from cotton monoculture towards greater crop diversity (both soybean and rice).

Ann Markusen (1991) helps explain the locational geographies of governmental investment of defense plants in the non-cotton near-Delta during World War II. Markusen’s thesis not only focuses on post-World War II defense industrial locations, but also has rich histories of the earlier 1930s and pre-war 1940s patterns of defense industry locations. Markusen’s answer of how federal government locations are determined is esoteric and nonformulaic. Of importance is the argument that defense industry is an agent of the “economic remapping” of the country, with communities growing or contracting due to particular defense locations. This growth pole theory is persuasive, but Markusen’s examples of sustained industrial vitality are not entirely applicable to smaller towns in peripheral, non-cotton Mississippi or Louisiana. I undertake a modified “miniature” gunbelt approach, as the spatio-military remapping is different at the smaller scale of the mid-twentieth-century Delta region.35

Yet, there were previous waves of government intervention in the cotton economy, especially during the Great Depression. Daniel (1986) is an excellent overview

35 Hooks (2001) takes a statistical approach towards the role of federal investment in defense-related industry as a change agent for Southern economic growth, concluding that such Southern industries had greater economic impact on rural development than their Northern counterparts.
of the power held by the federal government and its preeminent 1930s agrarian agency, the Agricultural Adjustment Administration. The “Triple-A” offered farmers financial benefits, including hundreds of millions of dollars equivalent to the modern “subsidy”.

Daniel’s research is important, but as a comprehensive examination of “agriculture”, this work avoids extensive specifics of state-level or crop-level agency measures.

An understanding of Delta production must examine the wider interconnected world of the cotton economy; studies of global cotton have informed this research. Beckert (2005) serves as a major foundation for understanding the global changes in cotton production since 1800. Cotton trade and production were not bounded by national borders, but merely rose and fell in response to the lowest available price or most efficient method of cotton production. This wider economic view is essential to understand structural economic changes in the cotton Delta: Beckert notes that “starting from the global context changes how we view each of the [global] cotton empire’s constituent parts and raises new questions about them.” For example, he identified how the Civil War created a break in cross-Atlantic cotton trade, and reorganized cotton relationships after war’s end in 1865, resulting in a more “American” and more “British” cores of production than before the war.36

Similarly, Hugill (1993) is a major additive for the wider interconnected American cotton production realms. Hugill’s focus, however, is cotton production in the nineteenth and early twentieth centuries, although his insights into the waves of cotton production throughout Texas are essential (including the movement of cotton production

36 Beckert (2005), p. 58. The global context can be viewed at the scale of the laborer: Beckert details the social differences in mobility of young women in China compared Massachusetts, where the expectation of living with parents for additional years in China meant a reduced labor force to work in potential Chinese cotton mills, compared to the young-female-dominated textile mills at Lowell, Massachusetts.
in that state from east Texas to west Texas). Likewise, western cotton’s agricultural
development was detailed in Hart (2003), who had an excellent focus on California
cotton in particular. However, Hart lacks a wider view, and instead chooses focus on an
individual year or individual farmer instead of longer, more comprehensive datasets.

Holley (2000) detailed the development, initial marketplace resistance, and
eventual acceptance of the mechanical cotton picker in the middle of the twentieth
century. Holley notes that mechanization of Southern agriculture occurred much later
than similar mechanization on Midwestern and Western farms, due to the inefficiencies
of existing labor and land arrangements throughout the South.\footnote{In 1920, the average land tenure rates for Southern farms were as follows: for white farmers, 60.4\% of farms were owned by the farmer, with 38.9\% of farms classified as tenants (including cash tenants and share tenants); for black farmers, 23.6\% of farms were owned by the farmer, with 76.2\% of farms classified as tenants. In Arkansas in 1920, 64.4\% of white farmers were owners and 35.1\% were tenants, with 25.4\% of black farmers as owners and 74.4\% were tenants. 1920 Agricultural Census. 1920. Table 13, p. 208.} One of Holley’s
revisions to historical scholarship is his thesis that rural Delta farmers (especially black
farmers) were not forced out of local agricultural jobs by mechanization; rather, these
farmers relocated to other parts of the country seeking better employment and social
opportunities. I challenge this narrative of an induced Great Migration to the north,
because of the rural-to-urban population transfers occurring \textit{within} Delta states.

Additional important studies of mechanization and its effects on tenant farmers
are seen in other works, including Day (1967). And an even earlier period of
mechanization in agriculture related to mechanization of the tractor. Sargen (1979)
analyzed regional differences in adoptions (and the Southern ‘lag’) of tractors on farms
both in the United States and around the globe. These studies are rare compared to those
dealing with more recent mechanical equipment: Sargen also noted that since the 1930s,
“economic historians have paid relatively little attention to the factors contributing to the ‘tractorization’ of U.S. farms”\textsuperscript{38}

Smith (1986) published the major study of the economic development of Arkansas in the 1940s, and his analyses of defense industries are transferable to similar plant locations in Louisiana and the wider Delta. Smith details the wartime industrialization changes resulting from a 1940s-era federal stimulus. However, Smith’s study ends with the end of World War II in 1945, and focuses attention (importantly so) towards more social and racial transformations than towards economic metrics. \textsuperscript{39}

Smith’s end date of transformation has limits: 1945 should not serve as a finale but as an intermission – the end of a moment (a defense-related industrial sector’s emergence), but not at all the realization of economic maturity.

For relevant histories of rural northwest Mississippi and west Tennessee, particularly dealing with the history of landscape change in Mississippi’s Yazoo Delta, see Saikku (2005), who details the necessary human-induced environmental changes that made eventual large-scale cotton production both possible and profitable. Otto (1999) details the struggle between modernizing the land in the era immediately preceding my study focus, with Brandfon (1967) charting the Yazoo Delta’s transitions before 1900. Woodruff (2003) undertakes an exemplary cultural history of the society of the Arkansas and Mississippi Delta regions with focus on the deplorable social and labor conditions of the Delta. Woodruff successfully likened the absolute control held by the planters over a

\textsuperscript{38} Sargen (1979), p. vii.
\textsuperscript{39} Bounded by 1945, Smith is not able to detail the postwar rural Arkansas exodus, and the economic development of creating wartime industries appears to be in a vacuum, leaving possible interpretations that a 1946 economy could easily regress back to 1930s cotton. The focus of wartime industry also limits the \textit{impact} of cotton mechanization and the postwar exodus.
group of largely African-American tenant farmers to the horrific “Congo Free State” colonial empire held by King Leopold II of Belgium.

This chapter outlined the series of formative changes experienced in the Mississippi Delta region’s cotton landscape between 1930 and 1970. Characteristics of cotton production that had aided Delta cotton production before 1930, served as comparative disadvantages after 1930: Delta cotton production was inefficient with respect to labor, mechanization, and land use when compared to production in the western United States and across the globe. These other production cores were more efficient with planting, harvest, and transport costs, and therefore non-Delta producers were more profitable with every additional bale sold on the world cotton market.

How did these “external” non-Delta cotton sources develop initially? How did production regions, both national and global, push the Delta to permanent secondary status by 1970? In the next chapter, an extended view of the development and eventual success of global cotton production will be addressed, along with the gradual westward move of cotton production in the United States. The study of these non-Delta cotton spheres is not trivial; it is only with a detailed examination of the wider interconnected world of cotton production that the shifting comparative advantages and disadvantages of cotton production of 1930 and 1970 are evident.
Chapter 2: The Interconnected Cotton World Beyond the Delta

During the nineteenth century, the realm of cotton commerce became increasingly globalized, with cross-continent and cross-oceanic economic links. American production and British consumption existed in a global network of cotton producers from Egypt to India. By the late nineteenth and early twentieth centuries, the dominance of U.S. cotton production on the world stage rearranged the previous century’s global networks, in favor of an enormous American cotton sector of production triumphing over smaller local hearths of cotton industry. By the decade after 1900, U.S. cotton growers produced over two-thirds of the total world factory supply of cotton.

Yet this dominance was ephemeral: even in the first decades of the twentieth century, the U.S. share of global cotton production was starting to decline in comparison to foreign competitors. Concurrently, synthetic fabrics threatened continued demand for cotton from any source. In the latter half of the twentieth century, cotton production both in and outside of the United States rapidly mechanized, modernized, and increased in total cotton yield. Long-established practices based on the availability of cheap labor for hand-picking were challenged by these new contexts, and dramatic re-configurations of plantation landscapes ensued. As American cotton was no longer preeminent among world cotton producers, important networks of the global cotton economy were reestablished and reemphasized. The major shift of cotton geography in the latter half of the twentieth century was towards producers in the developing world: lower costs of production in rising source areas such as India, Pakistan, China, Russia, and Turkmenistan tipped the global balance of cotton manufacture to the Eastern Hemisphere.
Simultaneously, a substantial geographic shift of cotton production occurred within the borders of the United States throughout the twentieth century. As a crop, cotton requires a high number of frost-free days, plentiful access to water (more so than crops of the Great Plains, by comparison), and rich soils that are hearty enough to sustain moisture-draining cotton cultivation over many years. These biological requirements define most of the southern latitudinal “half” of the United States from Atlantic to Pacific (excluding deserts, the Rockies, and the Appalachians.)\(^1\) So, the Atlantic South – the initial cotton source of cotton farming in the U.S. – was not the only potential cultivatable cotton land in the United States. The westward shift of U.S. cotton production during the nineteenth (but mostly the twentieth) century attested this coast-to-coast cotton agriculture.

The initial hearth of historical American cotton production was in the Atlantic States, spreading from the Sea Islands region of the Carolinas to the inland Piedmont territory in Georgia, South Carolina, and North Carolina by 1800. This was associated with a shift from long-staple West Indian cotton that only grew in the sea islands to the short-staple cotton that could grow in less demanding environmental settings and the new Whitney ginning methods that could remove the lint from this short-staple variety, broadly referred to as “upland” cotton. Successive waves of westward expansion of cotton production followed. By the 1830s, cotton production had spread throughout The “Black Belt” region, from the edge of western Georgia into Alabama and extreme northeastern Mississippi. It also spread into Texas as well, the annexation of that short-lived republic driven in large part by cotton interests.

\(^1\) Climate patterns identify the potential northern limit of “profitable” cotton production near Cairo, Illinois. 1900 United States Census of Agriculture. 1900 p. 406.
After the Civil War, the Mississippi Delta region became the next major cotton hearth, primarily through the clearing and draining of the once swampy bottomlands of the Yazoo Delta region between Vicksburg and Memphis. Although there were some earlier slave-based plantations along the Mississippi, this region was largely a new sharecropper-based cultivation system. The Delta boasted nationally-leading production in the early twentieth century, peaking its national share of total production in the 1930s. Texas and Oklahoma further increased production in the 1920s, and peaked as a national share of cotton production by 1960. In the post-World War II period, the cotton core moved west yet again, and new sources of cotton production in the U.S. West, including Arizona and New Mexico, but especially California, led the nation in production by the late 1970s. By 2000, western cotton, broadly defined from west Texas to California’s Central Valley, comprised the majority of American cotton production.

This chapter offers an historical geography of the wider (non-Delta) world of cotton, highlighting comparative advantages and disadvantages of producing regions. At key moments in the history of global- and national-scale cotton production, an array of economic factors coalesced to either foster or hinder further cotton production. The aim of this chapter is to identify the shifting connections and cores of cotton in the past two centuries, with an analysis of why and how places across the nation and globe did succeed and did not succeed in various stages of cotton production, thereby situating the interconnected world of cotton production beyond this study’s multi-state Delta area.

This wider economic contextualizing of the Mississippi Delta cotton region stresses that the cotton Delta was not particularistic: the Delta cotton landscape’s rise and fall was due to comparative changes in competition, productive capacity, and labor
external to the four-state Delta region of this study. While subsequent chapters are concerned with how these shifts played out for local land, labor and settlement systems, this chapter addresses how the shifting comparative advantages and disadvantages of cotton agriculture since 1800 affected national and global cotton production, and by extension, the Mississippi Delta cotton core.

Before the historical global and American national shifts in cotton production are detailed, a general overview of the basics of cotton farming must be outlined. Cotton is an annual crop, with planting dates determined by latitude and climate. In the Mississippi Delta, most cotton was planted in late April or May, developed bolls that split in the summer (which exposed cotton lint fibers), and was harvested around September or October. While cotton plants in the tropics can be categorized as perennials, Mississippi Delta cotton is produced from annual planting of cotton seeds.²

Historically, achieving profitable cotton production in the American South was a complex process with little margin for error. The U.S. Census of Agriculture of 1900 identified three factors that determined cotton production: the amount of acres planted annually (which was determined in large part by prevailing prices for cotton), conditions of climate upon the land (including the climatic effects on cotton’s often sandy or loamy soils, appropriate leaching periods, etc.) and the strength of invasive insects (not limited to the boll weevil, insects could be more prevalent in the midst of later spring weather.)³ If any of these factors changed significantly year to year, the amount of income earned from cotton harvest could sharply waver.

³ 1900 United States Census of Agriculture, 1900, p. 410.
Cotton production can be grouped into four broad types of cotton. “Tree” cotton, native to South Asia (comprising less than 2% of current world production); Levant cotton, native to the Middle East (comprising less than 2% of current world production); extra long staple or “ELS” cotton, native to South America (comprising about 8% of current world production); and “upland” cotton, native to Mexico (comprising over 90% of current world production.)

The ELS “long-staple” cotton was also known in the U.S. as “Sea Island cotton”, and was first planted in the Atlantic Sea Islands near Georgia in the 1780s. Initially the dominant type of cotton in North America, long-staple cotton was soon overtaken by production of the short-staple upland cotton, also known as “Mexican cotton”. Short-staple cotton became widespread after the adoption of Eli Whitney’s mechanical cotton gin, and was the most common forms of cotton in the American South, both in the antebellum and tenant farming eras. (In this study, cotton grown in the historical Delta is almost always this short-staple upland/Mexican cotton variety.)

As cotton cultivation moved westward from the Southeast past the Delta, ELS cotton found a new range of cultivation in the western United States. Also called “American Pima” cotton, this long-staple form is most common in California, Arizona, and New Mexico. Other regional names vary, such as “Egyptian cotton” describing ELS cotton grown in Egypt. Technically, there are over 30 different variations and “types” of cotton. However, all commercially-produced global cotton can be initially categorized into one of the four basic taxonomies.

The method of global cotton production has changed entirely over the course of the twentieth century, transitioning away from hand-picked cotton, and in the Mississippi

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Delta region, transitioning away from small plots of land and tenant farming. Before 1930, most cotton plantations were worked by sharecroppers or day laborers, with mules the motive power for plow and wagon. After 1970, cotton production was dominated by larger commercial farms using mechanized production methods. In the Delta region, the landscape became depopulated (due to decades of out-migration by farmers and farm workers), but both in and outside of the Delta, the entire process of the cotton harvest changed: cotton was processed into rectangular “modular bales”, made as efficient as possible for transport on large trucks or ships. (Modular baling was only introduced in 1971, but quickly became the most common method of baling.)

2.1 Global Sources of Cotton Production Since 1800

The cotton plant, native to near-tropical environments around the globe, has been cultivated since antiquity across both Eastern and Western Hemispheres, from historical China to Mexico to Egypt to the Indus Valley. However, it was not until the early waves of the Industrial Revolution arrived in the United Kingdom that “industrialized” post-harvest processes sufficiently lowered production costs enough to attract increased planting. Additionally, the widespread usage of the cotton gin (while extant for centuries, Eli Whitney patented a more efficient mechanical version in 1794) enabled rapid separation of cotton lint fiber from seed. By 1800, the worldwide cotton market was primed for take-off to meet the increasing demand for processed textiles: several areas

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5 Over 70% of Texas cotton was baled under “modular baling” processes by the early 1990s. Karen Gerhardt Britton, Fred C. Elliott, and E. A. Miller, “Cotton Culture,” Handbook of Texas Online, accessed 10 Mar 2013 <http://www.tshaonline.org/handbook/online/articles/afc03>. Published by the Texas State Historical Association.

around the globe were potential cotton producers, and Britain and other industrializing nations were active cotton consumers. It is this uniting of economic spheres, of producer and consumer, that created a truly global geography of the cotton economy, especially after 1800. These spheres are relationships between cores and peripheries. The nineteenth century was a colonial era, so the cotton-market relationship between Britain and India or Britain and Sudan was not one of two equal state actors, but rather an economic relationship between colonizer and colony.

Powerful nations attempted to develop cotton landscapes across the near-tropical world into enormous production hearths. Recent scholarship has stressed the centrality of the global characteristics of nineteenth century cotton production.\(^7\) Beginning in the 1780s, the source for cotton imports to Britain arrived first from the Caribbean, then Brazil, then India, and then the United States. In the nineteenth century, cotton production was at least marginally successful throughout the semi-tropical world. For example, a production explosion led to cotton factories in Mexican towns located in the near-jungle environment of the inland Yucatán Peninsula.\(^8\)

Beckert noted the truly global system of interconnected cotton networks, writing “the Liverpool Cotton Exchange had an enormous impact on Mississippi Cotton planters; the Alsatian spinning mills were tightly linked to those of Lancashire; and the future of handloom weavers in New Hampshire or Calcutta was related to such diverse factors as the construction of a railroad between Manchester and Liverpool, investment decisions of Boston merchants, and the tariff policies of the United States and Britain.”\(^9\)

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\(^7\) Beckert noted that “only in a global context is it possible to comprehend the role of cotton in the nineteenth century.” Beckert (2005), p. 7.

\(^8\) Beckert (2005), p. 50, 53.

geographies of processing and usage existed beyond the fields. Britain was home to a high percentage of the world’s textile mills throughout the nineteenth century, and it was not until about 1895 that the total number of spindles in Britain was less than the total number of industrial factory spindles in the entire rest of the world.\textsuperscript{10}

The spread of cotton across the growing Southern states in the United States, particularly after 1820, created an early cotton belt across the cultivatable soils of the American South. In fact, by 1850, the United States was the greatest supplier of cotton to the global market, with total yields far higher than any other region. The rise of the United States as the dominant world producer by 1850 was not an insular process; it also possessed global linkages. In the antebellum U.S. cotton world, a particular problem was acquiring investment capital for cotton crops, and the primary source of investment capital came from the United Kingdom. Although the source of financing for cotton in the U.S. South gradually transitioned away from Britain and towards firms from the U.S. North after the Civil War, the North did not achieve widespread control of most external capital financing for Southern cotton until after World War I.\textsuperscript{11} However, once Northern firms acquired this financing power over Southern cotton production, the returns were sharply directed back to the North: Hugill noted that in the 1920s, bankers from New York City would receive a surcharge on cotton bales from the U.S. South equivalent to as much as $5 per individual bale of cotton.\textsuperscript{12}

Why did the United States gain a majority global cotton share by 1850, and absolute supremacy by 1900, and not the tropical realms of Africa or Asia? One explanation of the rise of U.S. cotton explained its dominance due to two particular

\begin{flushright}
\textsuperscript{10} Beckert (2004), p. 1437.  \\
\textsuperscript{11} Buenger and Pratt (1986), p. 20.  \\
\textsuperscript{12} Hugill (1993), p. 86. 
\end{flushright}
comparative advantages: land and labor. The land and soils of the US South were appropriate for cotton production, and slave labor was cheaper than wage labor. Non-American cotton sources of nineteenth-century production were important, but the structural disadvantages of these locales (particularly with respect to infrastructure and developed markets or export systems) and meant that mass production of cotton would be delayed: cotton in Russia, for example, did not develop on an industrial scale of production until after 1870.\textsuperscript{13} Farnie argued that the dominance of United States production in the world cotton market was prefaced by a massive capital investment in domestic cotton infrastructure. For example, the total number of spindles – a key component of the textile industry – increased in the United States from about 1 million spindles in the 1830s to over 16 million spindles by the 1890s.\textsuperscript{14}

In other regions, more local explanations may suffice. Nineteenth-century primary records from Germany concerning business dealings with peasant farmers in Togo were examined by Beckert. In many instances, Togolese farmers were simply unwilling to sell their cotton to customers in a wider market base, diminishing the potential power of a “German” imperialist cotton sphere.\textsuperscript{15}

Of note was the practical divide between the theoretical global cotton world and the actual national cotton world of any given country. While the idea of a single nineteenth-century global free market of cotton flows run by businessmen who bought and sold regardless of international borders is attractive within a lens of world-systems theory, in many instances, consolidation of a particular nation’s political control over

\textsuperscript{13} However, by 1890, a sharp increase in cotton production had occurred in Central Asia (particularly modern-day Turkmenistan.) See Beckert (2005), pp. 52-54, 57.
\textsuperscript{14} Farnie (1979), p. 180. While Great Britain had a greater total number of spindles in the late nineteenth century, the rapid rise of American cotton textile infrastructure represented a much greater rate of increase.
\textsuperscript{15} Beckert (2005), p. 60.
territory, with the associated legal institutions, business contracts, and rule of law associated with national control were paramount in enabling cotton production (local or global) in the first place.\textsuperscript{16}

The clearest example of purely national concerns disrupting the international cotton trade occurred during the American Civil War. Global importers of cotton, particularly the United Kingdom, doubted the future reliability of Southern cotton availability.\textsuperscript{17} And these fears were not unfounded: US cotton production fell from 4,000,000 bales in 1861 to less than 300,000 bales by 1864. The combined yield from 1862 to 1865 was less than the yield from 1861 alone.\textsuperscript{18} Global importers of cotton were desperate to secure other sources of production. Beckert noted this desperation by arguing the singular importance of the American Civil War in the development of overseas cotton after 1860, writing that “the outbreak of the Civil War severed in one stroke the global relationships that had underpinned the worldwide web of cotton production and global capitalism for at least two generations.” This is not hyperbole: European consumers were exceptionally reliant on American cotton. In the 1850s, the United States supplied 60\% of German cotton imports, 77\% of British cotton imports, 90\% of French cotton imports, and 92\% of Russian cotton imports.\textsuperscript{19}

\textsuperscript{16} For a larger expansion of this argument, see Beckert (2005). Beckert relates the story of attempted cotton production in Mexico that largely failed until “the Mexican state had consolidated control over its territory.” Beckert (2005), p. 61.

\textsuperscript{17} And while additional worry stemmed from a predicted collapse of cotton production after abolition of slavery, post-emancipation labor arrangements meant that most former slaves in the South still worked in the cotton fields, supplying the necessary labor for continued production.

\textsuperscript{18} “Hay, Cotton, Cottonseed, Shorn Wool, and Tobacco – Acreage, Production, and Price: 1790 to 1970.” 1969 Census of Agriculture. 1970. The magnitude of the collapse of American cotton production during the Civil War cannot be overstated. In 1864, the total cotton yield of the United States (in bales) was less than the total cotton yield of 1819 – and in 1819, Florida and Texas were part of the Spanish Empire, Arkansas was not yet a state, and Alabama and Mississippi had only acceded to the Union during the preceding two years.

\textsuperscript{19} The end of Southern production led to a “cotton famine” by 1862. Beckert (2004), pp. 1408-1409.
The American Civil War changed global cotton production by increasing the territory of global source markets.\(^{20}\) Across the globe, cotton associations and producers lobbied home governments to gain access to other, more reliable sources of production, in case of a replay of the American 1860s. British interests brought cottonseed, investment capital, and government-funded railroad construction to India, in an attempt to “replace” cotton from the American South. The results were successful: India provided 16% of British cotton and 1% of French cotton in 1857; India provided 75% of British cotton and 70% of French cotton in 1862. The urban development of Bombay (now Mumbai) was largely due to the economic effects of Indian cotton production in the 1860s. Other new markets and sources developed in this post-1860 period: Brazil tripled its output by 1866. And Egyptian cotton (also tripling in output by 1866) gained a major role in world export of cotton during the Civil War, as about 40% of all cultivatable land in lower Egypt had been planted with cotton by the mid-1860s. Beckert notes that this was “a permanent economic change....historians of Egypt rank the American Civil War among the most crucial events in its nineteenth-century history.”\(^{21}\)

By the 1880s and 1890s, the developed world had acquired (and consolidated) control over territories suitable for cotton production, and development began in earnest. The United Kingdom fostered cotton expansion in the Egypt-Sudan corridor, as well as British India; France turned to Mali while Germany turned to small but productive Togo; Russia annexed much of Central Asia, including the valuable Turkestan region. By 1900,

\(^{20}\) Beckert wrote that the American Civil War showed “cotton manufacturers everywhere of the dangers of depending on a single supplier of cotton.” Beckert (2005), p. 56.

\(^{21}\) These markets had been tried before, but as the powerful global players in the world cotton trade refused to invest significant resources to their development, efficient production stagnated. In India, for example, “modern” cotton approaches had been occurring since the 1820s, without much success. See Beckert (2004), pp. 1413-1414, 1421.
as the world commodity chain of cotton production was increasingly globalized, individual nations worried more about *local* access to this global cotton market.\textsuperscript{22}

The continued existence of colonialism allowed for a particular system of colonizer-colony trade during the late nineteenth century. Most imperialist nations at this time were exporting large quantities of textiles (the finished products of most cotton inputs) to the developing world. The majority of this exported cotton was picked in various overseas colonies controlled by the European imperialists, shipped to Europe, processed in textile factories, then resold to the non-European world – including, ironically, the very places that had grown the cotton as a primary industry. For example, while the United Kingdom exported 73\% of all cotton textiles to either Western Europe or the United States in 1820, by 1896 76\% of all cotton textiles were exported to Asia, Africa, and Latin America.\textsuperscript{23}

By the end of the nineteenth century, the center of cotton production eventually gravitated back to the Americas. U.S. cotton production rebounded after the Civil War, with output in 1870 greater than in 1860, and with exports in 1880 greater than in 1860.\textsuperscript{24} These global transitions of cotton cores from one hemisphere to another changed the fates of the diminished Asian production regions: former producers of cotton became consumers. Beckert noted that India was turned “from a region of cotton exporters to a colony that consumed vast quantities of British yarn and cloth.”\textsuperscript{25} And the decline of cotton from the Eastern hemisphere also meant that the type of cotton changed. As short-

\textsuperscript{22} Beckert (2005), p. 56. With the example of Germany and Togo, Beckert argued that Germans were worried about a strict reliance on the US, India, or Egypt for continued supply of cotton, noting that “these nations used ever more of their own cotton in their own factories. The solution... was to be the growing of cotton in German colonial possessions.” Similar mindsets inhabited other imperial nations in this era, aiding the explosive growth of worldwide cotton planting.

\textsuperscript{23} Beckert (2005), p. 57.

\textsuperscript{24} Beckert (2004), p. 1427.

\textsuperscript{25} Beckert (2005), p. 50.
staple upland U.S. cotton was preeminent in the immediate antebellum world, former hearths such as Egypt saw their own particular versions of the plant pushed aside: most nineteenth century Egyptian cotton was long-staple, for example.\textsuperscript{26}

It is important to note that the Civil War “substitute” markets such as India, Egypt, and Brazil did not disappear after 1865. While American cotton production returned and increased, the combination of cotton from Brazil, Egypt, and India accounted for over 30\% of European imports by 1883 (up from about 15\% in 1860.)\textsuperscript{27} But, the strength of American production increased as labor arrangements that were economically beneficial to the planter elite eventually fostered an increase in tenant farming, which kept labor costs of production in the American South comparatively low. And because excessive costs by the landowner would be carried over as debt for the tenant farmer in the next season, labor in the U.S. South had very little social or political power. Production rapidly increased in the United States, in areas such as the Mississippi Delta region.\textsuperscript{28}

With these changes in mind, a global reach of cotton production existed. In 1900, the world’s top cotton producers were the United States, India, China, Egypt, and Russia. Yet there were other important global centers of production as well: for example, a major destination for relocating cotton manufacturing during this period (due to cheaper costs of production) was Japan.\textsuperscript{29} However, the sheer strength of acreage and yield output of U.S. cotton production consolidated a global cotton “core” in that country by 1900. In 1908, the total “world production of cotton for mill consumption” was estimated at about 19.6

\textsuperscript{26} Rose, Jaimee. “Arizona’s Cotton Truly is King.” The Arizona Republic. 06 Dec 2008.
\textsuperscript{27} Also see Beckert (2004) for a more detailed examination and historiographical analysis of individual regional cotton statistics and sources. Beckert (2004), p. 1422.
\textsuperscript{28} Delta cotton production expanded after the clearing and draining of local swamps after 1880.
\textsuperscript{29} Beckert (2005), pp. 57-58.
million bales, of which the United States produced over 13 million bales, or about two-thirds of total world output.\textsuperscript{30} (In 2012, China, the world’s largest cotton producer by an overwhelming margin, supplied just over one-quarter of total world output.)\textsuperscript{31}

This is not to argue that the nineteenth-century global network of cotton collapsed; rather, profitable production was so concentrated in the United States alone that national trends rather than global trends had greater effects on U.S. cotton in the immediate years after 1900 than in most decades after 1800. In fact, the nineteenth century could be accurately portrayed as a century of American cotton export \textit{growth}. In the early 1790s, American exports were statistically 0.2\% of the world share; by 1899, American cotton production was 80\% of the world share of international cotton export supply.\textsuperscript{32} However, the U.S. dominance would not last: the first half of the twentieth century was defined as the apex (and decline) of the era of dominant American cotton production, as foreign sources of cotton gained a larger share of the global cotton market, as worldwide production slowly rose.\textsuperscript{33}

Globally, cotton prices surged from 1918 to 1920, in the wake of the associated economic shocks from World War I. These cotton price increases were not the only agrarian fluctuation in the United States during this period. From 1918 to 1921, U.S. prices for general farm machinery (other than tractors) increased to more than 60\% of pre-World War I levels; tractor fuel costs increased to more than 90\% of pre-World War I

\textsuperscript{30} The World Almanac and Encyclopedia 1910 (1909), p. 328. By comparison, “British India” was the second largest source area, with just 2.9 million bales produced.

\textsuperscript{31} In some ways, this consolidation towards a 1900 U.S. core is the logical result of the decline of British cotton production. In Beckert’s quote about global interconnectedness in the nineteenth century (see the bottom of page 40 of this dissertation), virtually every region was a political part of either the United States or the United Kingdom. If British production ever waned in the late nineteenth century, American cotton would naturally dominate the remaining world market as the primary cotton producer.

\textsuperscript{32} “Cotton, Hemp, and Flaxseed.” 1900 United States Census of Agriculture, 1900 p. 405.

\textsuperscript{33} Holley (2000), p. 11.
levels; farm “feed” costs doubled; the cost of hired farm labor increased two-and-a-half times by 1920 compared to 1914. Even (mostly) gasoline-powered tractors, whose recent invention and improvements had led to a decline in prices from record highs in the early 1910s, increased in price by 25% from 1917 to 1919.³⁴

In addition, rising costs of all associated parts of cotton production within the United States led to the slow rise of production share by global cotton producers, given the cheaper labor costs of these foreign competitors. Worldwide, cotton production in the early twentieth century was still highly dependent on masses of manual labor. The labor-intensive characteristic of cotton production was universal, so many cotton mills relocated from Europe to poorer regions with less labor expenses.³⁵ This process of seeking lower and lower costs led to steady increases in cotton production after World War I in the lower-cost regions of Egypt, China, and India, in particular.³⁶

However, global production in the 1910s and 1920s were particularly difficult eras of production for countries or regions directly involved in the many armed conflicts across the globe (such as World War I). For example, in Russia, after the economic turmoil dealt by World War I, the 1917 Revolutions, the subsequent Russian Civil War, and severe famines and droughts in 1920-1921, the total cotton production of the country by 1922 had fallen nearly 95% from 1914 pre-war cotton production yield levels. European production also plummeted. And the United States, untouched on the home front by war, still experienced the effects of fluctuating prices, cotton supply and climatic

³⁴ Sargen (1979), pp. 157-158.
³⁵ Beckert (2005), p. 57.
conditions, all of which further offered an opening for growth of cotton production by the developing world. African and Asian production rose continually in this period.\textsuperscript{37}

Also during this era, synthetic fabrics put a dent in the worldwide cotton trade: products including rayon, for example, became more popular at the same time that cotton seemed outdated in the fashion world. And women’s clothing styles used less and less material after 1920, causing a decline in demand for cotton in clothing and textile production. The popularization of artificial fabrics posed an existential threat to a future American cotton industry.\textsuperscript{38}

One particular disadvantage faced by American cotton producers in an increasingly foreign-export-heavy international cotton market was the problem of oversupply. Worldwide, too much cotton was produced so that supply outstripped demand. As the world’s largest cotton producer, the United States suffered the greatest effects of this oversupply. This “extra” cotton was not a perishable item or foodstuff, so it could be stored as “carryover” for the next year. While there had been short periods of high carryover, such as during the post-World War I cotton market shocks that peaked in 1921, a sustained period of extremely high carryover existed in each year of the 1930s. In 1932, 1934, and 1935, carryover bales were equal to more than two-thirds of those years’ newly-produced cotton bales. In 1938, carryover bales equaled 96% of new production, and in 1939, carryover bales equaled 110% of new bales produced in the United States. The economic effects of an enormous system of bales-in-reserve meant

\textsuperscript{37} Daniel (1986), p. 22.
\textsuperscript{38} Holley (2000), p. 11, p. 55.
that prices would be kept low in the U.S. for an extended period while the “glutted market” dealt with both old bales and new.  

Finally, the rapid rise of non-American cotton production since World War II, particularly in Asia (South Asia, Central Asia, and East Asia), must be addressed. The economic decline of American cotton was substantially affected by changes accumulated during World War II. From 1941 to 1945, the United States exported just 24% of the total cotton it produced – the lowest such export ratio since the blockade of the Gulf Coast during the Civil War. From 1900 to 1940, the U.S. averaged an exports-to-total-cotton-produced ratio of 58%; from 1945 to 1970, this measure stood at just 35%. Such data should not imply World War II as the only agent of change (the percentage of U.S. cotton exported had already declined from 1900 to 1930, and actually increased after 1970); however, the decrease of international cotton trade from the United States during the early 1940s allowed for the expansion of other global cotton producers to claim a foothold in the worldwide cotton export market. Because producers such as India and China were already cutting into the American share of world production by 1940, these areas were primed to rapidly increase output whenever U.S. production faced a challenge.

One such challenge for American cotton production surfaced immediately after World War II. While the global zones of increasing cotton production were not yet mechanized, these foreign sectors typically lacked the widespread systems of hand-picked labor and tenant farming that plagued U.S. cotton hearths. Although tenant farming was in decline by 1945 (albeit slowly), U.S. cotton production faced severe

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inefficiencies of production (and higher associated costs) compared to the low-cost production in Asia. While Japanese cotton production was not “modern”, it was neither saddled with a destructive system of tenant farming nor overproduction. Or, as Holley summarized, “the fundamental problem was the high cost of producing American cotton because its inefficient, archaic methods priced it out of world markets.” In a world with cheap synthetic fibers and fabrics, the American cotton landscape in the South seemed both “impractical and indefensible.” (These inefficiencies of the American cotton landscape were specific inefficiencies of production that plagued the American South. These inefficiencies were also prime reasons for the westward push of U.S. cotton growth towards California; this westward push will be detailed in the next section.)

There were many shifting zones of cotton production after World War II. Especially after 1960, foreign production rapidly increased production in comparison to the United States. The global output of cotton nearly doubled between 1960 and 2000, but most of these output gains came from either China or India with smaller buy important gains from Pakistan, Turkey, and Greece. In Europe, the three major producers in 1960 were warmer countries with near-Mediterranean climates: Spain, Greece, and Bulgaria. All three countries declined in production during the 1970s. With accession into the European Union (EU) in the 1990s, however, cotton production slowly rebounded in Greece and Spain. Nevertheless, the EU supported cotton growers through subsidies and further assistance; Baffes noted that EU cotton farmers in the 1990s

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41 Widespread inefficiencies of U.S. cotton production are perhaps best seen in comparative analyses of “man-hours” of labor required for production of a single acre or single unit (cotton bale) of a crop. These measures – addressed at length in Chapter 3 and Chapter 6 – were very high for American cotton, in comparison to other crops and other regions, even in the 1940s. For example, from 1940 to 1944, each acre of U.S. cotton produced required 53 man-hours of labor for the actual harvest period, which was nearly equivalent to the harvest-era labor inputs required since 1800. Holley (2000), p. 14.

42 Holley (2000), pp. 120, 193.

“received more than twice the world price of cotton.” These payments, combined with comparatively low production, kept European growers firmly on the world periphery of cotton producers by 2000.44

Production in China took a more authoritarian path after communist victory in 1949. The government assumed complete control of cotton production under the “Five-Year Plan” beginning in 1953, complete with quotas and production targets. Chinese cotton increased in acreage and yield, but its capacity was still inefficient, and the government attempted to increase output by raising cotton prices in 1978 and offering some sort of land use to individual farm families by 1980. While comprehensive data analysis of Chinese cotton production is difficult due to the secrecy of business processes and government records (like many other state-controlled industries), it is clear that by the twenty-first century, China had become the world’s largest cotton producer, consumer, and stockpiler of cotton.45 Cotton production in the Soviet Union during the 1960s and 1970s followed many of the same state controls practiced by China. However, as production was strongest in the various Central Asian Soviet Republics, after the breakup of the Soviet Union in 1991, newly-formed Uzbekistan and Turkmenistan became cotton powers in their own right. Uzbekistan in particular was classified as the world’s fifth-largest cotton grower after 1991, exporting most of its crop.46

How were developing nations able to increase cotton production compared to the American share of production? One comparative measure that warrants further detail is average farm size of international cotton producers during their post-World War II cotton

44 Baffes (2005), p. 266.
45 Baffes (2005), p. 266.
46 Even in the post-Soviet era, Uzbekistan’s cotton industry still possessed practices similar to “state control”. Cotton farmers were so highly taxed they barely earned one-third of the export price. Baffes (2005), pp. 267-268.
ascendancy. In general, Southern farms in the United States were smaller than Northern farms, and this difference correlated with productivity, albeit comparing output of different crops.\footnote{These areal differences will be discussed more in Chapter 3. Additionally, during the middle of the twentieth century, most Northern farms were larger than 100 acres and most Southern farms were smaller than 100 acres. Sargen (1979), p. 232.} Across the global cotton world, as foreign sources increased output in the 1960s and 1970s, many of these rising producers possessed very small farm sizes, theoretically limiting large-scale commercial agriculture – and theoretically limiting yields, based on late-twentieth century cotton yields on American farms of smaller sizes. Many of these global sites of production had extremely small average farm sizes. In the generation after World War II, the overwhelming majority of farms in Japan and Taiwan were less than 10 acres in size. A 1962 government survey in India found similar results in South Asia, with 81\% of farms less than 10 acres in size.\footnote{And the Indian system was not one of several small farms and a few massive holdings: just 12\% of total farm area was held by the 1\% of farms larger than 50 acres. Sargen (1979), p. 234; Data from “IBRD Report for India”, 1971.}

However, in the developing world of the 1960s, smaller farm size did not necessarily give way to large farm size, even as these nations introduced agricultural modernization practices, such as fertilizers, weedicides, and insecticides. The introduction of these inputs correlated with increased farm size in every region of the United States, but in the developing nations, this trend did not appear. Between 1910 and 1965, at which time these new chemical processes were introduced to Japanese farms, the proportion of farms under about 2.5 acres continuously ranged between 68\% and 73\%. Similarly, between 1920 and 1960, the proportion of Taiwanese farms under about 5 acres actually increased from a low of 70\% to a high of 89\%. This increase of small farms is in direct contrast to the American experience in the latter half of the twentieth
century: paradoxically, Taiwan’s large farms disappeared with the advent of more mechanization and fertilization methods.⁴⁹

In Mexico, the spatial organization of farms followed the legacy of the historic large-scale hacienda and small-scale ejido system.⁵⁰ Unlike other global patterns of agricultural land size so far examined, the Mexican arrangements had a two-track system of very small farms and very large farms. On the lower spatial end, about 43% of Mexican farm acreage was comprised of ejidos, with an average acreage of 70 acres (with just 16 acres identified as “cropland”). On the upper spatial end, more than 51% of Mexican farm acreage was comprised of large farms, with an average acreage of over 680 acres (and 68 acres identified as “cropland”).⁵¹

In other regions in Latin America, similar patterns of large landholdings were observed post-1950, and these larger farms exhibited very high yields compared to small farms. Between 1950 and 1960, a number of South American countries displayed the production-related efficiencies of scale in a mechanizing farm world: in Argentina, Brazil, Chile, and Colombia, “large farms” were more than twice as productive per unit area than “family farms”. The difference in productivity per unit area (hectare) was even more pronounced when comparing large farms to small minifundios (less than 12.3 acres, or less than 5 hectares). Areal-normalized productivity disparities were as follows: in 1955 in Chile, 4.3 times greater; in 1960 in Argentina, 6.2 times greater; in 1950 in

⁵⁰ The hacienda system was not the only historic determinant of Mexican agricultural characteristics and farm size: some older strands of labor arrangements in Mexico date from the encomienda system dating from the “New Spain” colonial dominion of the Spanish in North America.
⁵¹ Data from 1960 Agricultural Census of Mexico. Figures converted from hectare acreage; Yudelman et al (1971).
Brazil, 6.8 times greater; and in 1960 in Colombia, large farms were 9.9 times more productive per unit area than the small minifundios.\textsuperscript{52}

Why are comparative farm sizes relevant in a discussion of global cotton trends? Such analyses are important because increasing cotton production in multiple cotton-producing countries across the globe on very small farms meant that the American model of post-1945 agriculture, with small farms a disadvantage, did not necessarily apply around the globe. Specifically, these global sources of cotton possessed much lower labor and processing costs, so much so that smaller farms were not simply viable but successful in the immediate post-war period as these countries increased cotton production. Unlike the Delta South, where small farm sizes hampered efficient economies of scale (and where small farm sizes eventually gave way to fewer large farms in a given area), global output increased in countries with smaller farms.

Yet it was not only lower costs that allowed smaller global farms to compete, but also the significant effects of mechanization upon these developing countries. A 1971 study examined the effects of the various historical waves of “modernization” upon East Asian agriculture, calculating the effects of mechanization, chemical inputs, and general technological advancements upon farm yields and farm labor. Both Taiwan and Japan experienced rapid increases in yield per acre and output per farm laborer, with annual yield increases in the 1950s and 1960s averaging four- and five-fold the rate of annual yield increases across multiple decades before 1950.\textsuperscript{53}

Similarly, Indian agriculture was in a state of flux during the 1960s and 1970s, with some regions in India engaged in widespread mechanization, incorporating farm

\textsuperscript{52} Data from The Economic Survey for Latin America (1966). Discussed in Sargen (1979), p. 252.
\textsuperscript{53} Specific periods for Japan were: 1920-1940 and 1952-1967; specific periods for Taiwan were: 1901-1950 and 1952-1966. Yudelman et al (1971).
machines and hybrid seed planting with new methods of irrigation and chemical fertilizers. Conversely, other regions had near-universal traditional agricultural methods. Unsurprisingly (given other global outputs related to mechanization), increases in agricultural yields were slow in the years and the regions dominated by traditional farming, but rapid, with nearly ten-fold increases in yields in regions with mechanized agriculture.\textsuperscript{54} Clearly, mechanization could aid the development of global farms, even as average farm size stayed comparatively low.

United States cotton production slowly declined as a share of global cotton production during this post-World War II period. But there were other competitors beyond a particular set of international borders. One of these was the return in popularity of synthetic fibers. Like the post-World War I period, the decades after World War II saw the popularity of polyester (peaking in the 1970s) as a viable replacement of cotton. In fact, by 1973, of all the “textile fibers” used in the United States, cotton was just one-third of the total amount, with “durable press” fabrics and polyester synthetics comprising the majority of American textiles.\textsuperscript{55} While synthetic fibers were initially expensive on the world market, after about 1975, the price per unit for cotton and polyester have been roughly equal. And these comparative prices have led to significant

\textsuperscript{54} During a series of rolling study periods of Indian agricultural regions with average study between 1954 and 1964, no region of India ever experienced an annual increase in agricultural outputs greater than 5%, with most regions averaging an annual increase in yield productivity of just 2%. However, during a subsequent rolling multi-year study period, with average range between 1964 and 1970, the regions of Punjab and Haryana averaged an annual yield increase of nearly 20%. See Evenson (1972). Punjab and Haryana had several economic advantages that led to these measures: the regions were located in the fertile Ganges River region, adjacent to the national capital of New Delhi. In addition, the average farm size in Punjab was twice the national average farm size in India. However, the early adoption of mechanization in these regions appears to be most responsible for the swift productivity gains. Productivity gains, while usually measured in terms of yield, can also be quoted in terms of labor savings. In the same Indian study area, over 100 million total “man-days” of labor were replaced by mechanized farm technology by in the period from April to June alone by 1970. For example, during the 1960s, the region was home to 30% of all tractors in India, despite possessing less than 3% of India’s total land area. Billings and Singh (1970), p. 5.

rises in global synthetic consumption. When measuring the total fiber consumption and polyester with respect to world consumption, polyester and other synthetics gained a majority of world consumption by 1976. Cotton’s share of world consumption summarily fell to just 40% of fibers (natural or synthetic) by 2001.56

Global production by another country first overtook American production in 1966, when China produced more bales than the United States. In 1967, cotton from the U.S.S.R. was more numerous than American cotton.57 There were periods of flux for both the U.S. and the world: for instance, during the decade of the 1970s, the total production of cotton from the rest of the world entered a short period of decline in output.58 And the downward trajectory of American cotton as a player on the world cotton market by 1970 was not permanent: the U.S. share of global production rose from 12% in the 1980s to 19% by 2000.59 But, after 1981, China has continuously out-produced the United States in terms of total bale yield (Figure 2.3).60 Yet, even in the twenty-first century the United States was a distant second in global production behind China, and its share of global production was a paltry compared to the supremacy American cotton enjoyed in the first decade of the twentieth century (Figure 2.1).

While the rise of foreign producers and the rise of synthetic fibers as popular cotton substitutes are blamed for a general decline in the share of U.S. cotton production in the global market after 1930, many additional reasons exist. Federal acreage control

57 Data from United States Department of Agriculture, Commodity Prices, retrieved at IndexMundi.com.
59 Some of this rebound had to do with better marketing strategies. The group known as “Cotton Incorporated” brought together American cotton growers to fund various advertising attempts and to encourage more efficient factory production of cotton fiber. See Beckert, Sven. Review: Jacobson, Timothy and George D. Smith. Cotton’s Renaissance: A Study in Market Innovation. The Business History Review. 77.1 (2003), pp.139-141.
60 Data from United States Department of Agriculture, Commodity Prices, retrieved at IndexMundi.com.
programs lowered the total amount of cotton planted (and therefore produced) labor shortages occurred related to World War II, and some states possessed specific industry hardships (such as the lacking “lint-processing industry” in Texas.)

The specific issue of government-supported subsidies to historical Delta cotton producers as “support” will be discussed in detail in Chapter 4, with a deeper examination of subsidies to American cotton growers in the twentieth century. However, other countries had similar subsidies. Aksoy and Beghin argued that these “cotton support policies” have artificially reduced world prices for cotton by up to 15% compared to the theoretical world price without governmental assistance. By 2000, the numbers were staggering: out of a $20 billion world cotton market, the United States spent just

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under $4 billion in subsidies, the European Union spent about $1 billion in subsidies, and Brazil, Egypt, India, Mexico, and Turkey spent more than $500 million in subsidies. Combined, these nations (along with a small but important subsidy sector from China) subsidized about 30% of the value of the global cotton market.  

Subsidies can have additional destructive market effects unrelated to direct farmer payments. If subsidies are ended, or are simply reduced, additional economic shocks can occur. In 1985, the United States passed a new “Farm Bill” that lowered the effective “floor price” paid as government-funded “support” for cotton. Because of previous subsidy policy, the United States still held an enormous percent of world cotton supply stocks (ranging from nearly 70% in the early 1960s to about 35% by the 1970s). With the passage of the new Farm Bill and the new, lower floor price, the previously-bought cotton was now marketable at the lower price, and the United States dumped its stored cotton onto the world market. However, this increased supply, which further drove down world prices, and the 1986 world price was just half of the 1984 world price. The effects of subsidies on cotton economics were negative, and yet reforming subsidies also proved challenging to global cotton growers.

Other technological changes have arisen in global cotton since 1970, including genetically modified cotton known as “Bt cotton”, first grown in the United States in 1996. By 2003 an estimated 70% of all American cotton acreage and 20% of Chinese cotton acreage had some sort of genetically modified cotton. However, these modifications were less transformational (and less controversial) than other types of

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62 Aksoy and Beghin (2005), p. 12. Askoy and Beghin further note that without subsidies, Africa and central Asia would produce about 5 percent more cotton, while the United States and the European Union nations would produce about 8 percent less cotton. The subsidy system truly distorts global production geographies.

genetically modified crops. Conversely, a rise in “organic cotton” developed worldwide in the 1990s, but certified organic cotton has not had any of the high adoption rates possessed by genetically modified cotton.

But the clear driver of shifts in global production has been the search for lower costs of production. As technology and labor patterns became more efficient, and as yields became higher per unit area (often due to chemical additives) overall costs of cotton production declined. Since 1800, “real” cotton prices have gradually but consistently declined (absent short-term price swings typically related to war.) The geographies of concentrated cotton production are evident: by 2000, nearly 70% of production occurred in developing countries. Specifically, a 2001 industry survey identified the African nations of Benin, Burkina Faso, Mali, Tanzania, and Uganda as the lowest-cost producer nations; the United States, Israel, and, most likely, Spain and Greece were charted as the highest-cost producer nations.

Cotton production followed the cheapest inputs and lowest costs. And cotton is still significant to the economies of these developing nations: cotton exports from West African cotton-producing countries, for instance, accounted for about one-third of all exports from those countries by the late 1980s. By the twenty-first century, the world was once again a global cotton system of connected producers and consumers across different continents and countries. But this global system was the result of two centuries of production shifts, as nations with efficiencies of scale and low production costs thrived (until those nations were at a disadvantage to newer, more efficient producers.)

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64 Baffes (2005), p. 263.
65 Baffes (2005), pp. 259-261. Note: European nations were not surveyed directly and were indirectly estimated. Survey performed by International Cotton Advisory Committee.
2.2 The Westward Shift of Cotton Production in the United States

Previous discussion focused on international changes in cotton production and trade, highlighting the economic effects of global change to American and world cotton landscapes since 1800. However, there was a significant amount of change driven by cotton shifts within the United States. Especially in the early and middle of the twentieth century, the changes in the Mississippi Delta cotton region were not necessarily driven by global trends, but rather by national trends: in the timeline of cotton production, the United States was by far the world’s biggest producer of cotton in the late nineteenth and early twentieth centuries.

For many periods of the last two centuries, the majority of worldwide cotton production was so heavily concentrated in the U.S. that changes in American cotton were effectively changes in “cotton” altogether. Accordingly, many of the initial transformations of the 1930s and 1940s were national-level changes. The resulting comparative disadvantages of the Delta in the face of comparative advantages faced by global producers did not totally materialize until the 1950s and 1960s, at a time when the United States lost its status as the world’s major cotton producer.

This section addresses these national-level changes, and contextualizes national trends in relation to the economics of cotton production in the Mississippi Delta. The Mississippi Delta cotton world was not the only major historic production region within the United States. The “core” cotton-production areas in the United States moved westward during the nineteenth and twentieth centuries: from the Atlantic Southeast to the Deep South Southeast; then, to the Mississippi Delta, primarily after the Civil War; then, to the Texas and Oklahoma (each with a longer history of cultivation but their
cultivation was strengthened in the early twentieth century); then, to the Far West, including Arizona but particularly California (Figure 2.2). The comparative efficiencies and inefficiencies that allowed each core cotton region to rise and fall within the national share of American cotton production will be examined. Primarily, these economic trends will be assessed for their effect or influence upon changes in the Delta cotton region.

The broad Southeast region, from the Carolina Piedmont to the Alabama Black Belt, only possessed a national cotton dominance until the end of the nineteenth century. Attempts at cotton production in the territory of the modern United States date from Virginia plantings in 1721, but international trade was virtually nonexistent: the first export of cotton from the American region did not occur until 1784, at a size of just 2 ½ modern bales.67 Historical production in the Carolina-Georgia Sea Island coastal regions in the eighteenth century was focused on slave-labor rice production. In this era, farms raised cotton as an experimental crop only.68

Figure 2.2: The sub-national regional breakdown of U.S. cotton production during the first 75 years of the twentieth century. Note the relative decline of the Mississippi Delta region (the “Delta South”).


Widespread production of “sea island” short-staple cotton in the U.S. was made possible by an efficient mechanical gin (which separated the seeds from the white fiber lint), patented by Eli Whitney in 1794. Labor-saving devices in the cotton industry had existed for centuries: a primitive seed-removal machine known as the “churka” developed in historical India, and the idea eventually spread to the Mediterranean and the Caribbean. However, Whitney’s gin of the 1790s was indeed revolutionary because of its industrial efficiency on both tropical “black seed” (long-staple) and the less-tropical “green-seed” (short-staple) cotton, greatly increasing potential production of any area. A saw-like modification implemented by Hodgen Holmes led to greater adoption in inland areas. While gradual, pre-industrial production of cotton existed in the Piedmont Carolinas in the 1780s, the cotton-gin-enabled production levels after 1800 rose quickly. The cotton belt moved throughout additional Atlantic States in the early nineteenth century, from Virginia to northern Florida, but concentrated in the Piedmont regions. Large-scale plantation farming in this antebellum area resulted in a cotton core where farms with more than 1000 acres were common.

This early nineteenth-century wave of Southeastern cotton production did not initially extend to the Mississippi Delta states, in part because of changing political geographies of North America: all of the Delta states were not yet under U.S. control in 1800. But cotton did come to the western South, as a product of the changing dynamics of the Caribbean-and-Gulf Coast sugar economy. Hugill identified a major economic difference: sugar production in the tropical portions of the New World was far more resource-intensive (requiring slave labor, available land to cultivate, and the expensive construction of sugar factories) compared to cotton production (which required only slave

69 Long-staple “sea island” cotton grown in South Carolina and Georgia an offshoot of West Indies cotton.
Therefore, cotton was not only possible to grow, it was profitable, and comparatively *easier* to grow than sugar. As land in the present-day U.S. South was consolidated under the control of a single United States governmental authority, Southern regional cotton production thrived. Particularly after 1820, planters experimented with a heartier “upland cotton” that possessed higher yields and greater frost resistance.\(^7\)

Production spread west to the Deep South, with particular plantings in the fertile “Black Belt” region of Alabama in the 1830s. Eventually antebellum cotton was grown in southern non-coastal (and non-Delta) regions of Louisiana and Mississippi. In each of these Southern cores, the mass amount of labor required to work the hand-picked cotton landscape; as a result, the availability of large numbers of slaves were they key variable in successful Southeastern cotton production. North of the Ohio River, cotton cultivation was extant in the early nineteenth century, but only as small-scale, nearly subsistence-style farming. Once increased transportation and market networks linked these regions to the South (especially after 1840) home-grown cotton was phased out in Ohio or Indiana in favor of cheap imported Southern cotton.\(^8\)

Production of this short-staple “upland” cotton crop spread all across the South as individual planters saw its success in neighboring communities, and by the Civil War, cotton production had spread as far as central Texas.\(^9\) The new upland cotton was successful even in small patches along the Mississippi River as far north as west Tennessee – the northern edge of the wider Mississippi Delta region. By the Civil War, widespread cotton production did in fact reach the lower sections of Louisiana and

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\(^7\) Hugill (1993), p. 81.
\(^8\) This new form of “upland cotton” (also known as “Mexican cotton”) was *Gossypium hirsutum*. See Hugill (1993), p. 82 and Fryxell (2000).
\(^9\) Aiken (2010), p. 119-120.
Mississippi, but production had not yet reached the alluvial Delta core, as that region was still largely bottomlands and swamps. However, the location and climate of the Delta core left that area well-situated for sustained cotton production in the late nineteenth century, once the wider inland Delta bottomlands were cleared and drained in the 1880s and 1890s. Hugill argued that the development, infrastructure, and institutions associated with nearby cotton production in the nineteenth century directly laid the groundwork for the future economic growth and expansion of the various Delta states.

One initial limit to plantation agriculture in the American South was the lack of efficient transportation routes. Most plantation agriculture in the South stayed near coastal ports or large navigable rivers (Chesapeake tobacco, Carolina rice, and Louisiana sugar) until the extension of railroads to the interior South in the 1840s and 1850s. Only with these mid-nineteenth-century rail connections were large cotton belts across the Southeast were aided in their development, especially in inland Georgia and Alabama.

Other crop cultivation theoretically could have been attempted across the Southern cotton world, but the nineteenth-century South was not a likely area for long-term growing of the other American staple crops at the time. For example, wheat or oat production was unlikely because of the local climate and the soil quality. And while corn acreage was greater than cotton acreage until the 1850s, corn was grown as a “food crop” while cotton was the primary “cash crop”. (Just as better transportation from the South to the Ohio Valley allowed the Ohio Valley to import Southern cotton, better transportation

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74 Daniel (1986), p. 3.
75 Hugill (1993), p. 169. Hugill argued that “the driving force of expansion in the Gulf Coast and up the Mississippi was cotton.”
from the South to the Plains and West after the Civil War allowed the South to import corn and other foodstuffs.)

In many ways, the Southeastern non-Delta states were victims of cotton overproduction before the Civil War: soils were generally “worn-out” and destroyed from centuries of cotton production. After the Civil War, these same poor-soil Southeastern states were some of the first adopters of early nineteenth-century fertilizers including guano from Peru, “barnyard manures”, and cottonseed. The continued development of more powerful chemical fertilizers was a direct result of economic trends in the cotton market: as cotton prices continued to decline from the 1870s to the 1890s, fertilizers became extremely important, with their potential to maximize productivity throughout the sapped soils of the cotton Southeast. Yet, chemical additives could only do so much, and after a century of sustained cultivation, last-ditch fertilizers could not immediately repair low fertility in the Atlantic-facing Southeast.

In the fertile Mississippi Delta, however, intense cultivation had only dated from about the 1880s, so no special chemical additives were needed for the soil, and the use of chemical fertilizers was not widespread. However, this became a major problem by the Depression era: the then-overworked Delta soils desperately needed chemical fertilizers, but in this period, most Delta farmers lacked capital reserves, and only possessed farms under mortgage arrangements (complete with interest payments.) Thus, the costs of experimentation with fertilizing methods were too high for Delta farmers, which decreased the productivity and quality of Delta cotton as the twentieth century progressed. Comparatively, western farms (Texas, New Mexico, etc.) were not bound by

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these financial obligations, which allowed for increased fertilizer adoption, which eventually assisted the emerging region of productive, cheap cotton in the west.\textsuperscript{79}

After the Civil War, national cotton production and prices rose, only to decline in the mid-1870s after an oversupply of newly-planted cotton flooded the market.\textsuperscript{80} During this post-Civil War era of record cotton profits, planters did not use earnings as investment capital for future crops. Instead, they spent earnings on “rebuilding homes, barns, fences, and in restocking their plantations.” Renewal of the antebellum cotton infrastructure greatly influenced the development of the tenant farming system, but it also perpetuated a system where Southern cotton farmers had little cash on hand.\textsuperscript{81}

Several important geographic shifts of cotton production occurred between the Civil War and the Great Depression, with a particular shift around 1880. Aiken identified both the greater Mississippi Delta region and an interior Southeastern line (from Virginia to Alabama) as developing or increasing production in this era, while the Natchez district, the Suwannee Basin, the Black Belt, and the Deep South’s Piedmont regions all declined in productive importance.\textsuperscript{82} In terms of total cotton farmers, cotton farms, and various measures of bales per acre, the Mississippi Delta cotton region could be described as the “core” American production region at the beginning of the twentieth century. In the broad century after abolition, the Delta cotton world developed tenant farming systems,

\textsuperscript{79} 1900 United States Census of Agriculture, 1900, p. 408.
\textsuperscript{80} The price floor of 13 cents per pound in 1876 was still higher than production costs for cotton, so continued cultivation of cotton was profitable. 1900 United States Census of Agriculture, 1900, pp. 406.
\textsuperscript{81} This problem was further perpetuated by the general economic decline of the 1870s-1890s period in the United States, as prices in virtually all crops and commodities fell between 1872 and 1894. And because cotton prices fell faster than the rise of production, as the US census reported, “the larger the [cotton] crop, the greater the catastrophe to the producer in lower rewards for his labor, and in higher rates of interest of all capital of which he could get the use.” 1900 United States Census of Agriculture, 1900, p. 407. Also see U.S. Census Bureau, Report of Industrial Commission (1900), p. 143.
\textsuperscript{82} Aiken (2010), p. 132. One reason for declines in the South was due to the effects of the boll weevil during the 1910s, as these regions were too passive in managing or eradicating the weevil.
where land was effectively “rented”, as the dominant labor arrangement. These shifts are evident in a 1900 Census publication identifying the “mean center of production” for cotton production from 1850 to 1900. Although the results are based on county-level production data (and therefore generalized), important patterns are evident (Figure 2.3). When mapped, these coordinates identify the shift westward from Alabama in the antebellum era; the shift north by 1880, as early Delta cotton production occurred; and the shift southwest after 1880 due to the effects of the magnitude of Texas production to the Southwest.

Figure 2.3: The geographic center of cotton production in the United States, 1850-1900. The mean location of cotton production moved westward from Alabama, then moved north and west by 1880, as early Delta cotton production occurred, and moved south and west after 1880, as the magnitude of Texas production pulled the average location westward. Coordinate data listed in 1900 United States Census of Agriculture. Base map copyright 2013 Google Earth, image data by Terrametrics.
Some of the nineteenth-century geographical shifts of cotton cores were explained by multiple factors, both environmental and economic. Sea Island long-staple cotton, for example, had existed in the Atlantic regions of South Carolina, Georgia, and Florida throughout the nineteenth century, but the overall share of this type of cotton was dwarfed by upland cotton by century’s end (3.5% compared to 96.5%). The relative ease of production of upland cotton within the Piedmont was a reason for upland dominance, but processing and transport costs were important. While sea-island cotton was typically more valuable at market than upland cotton was (South Carolina sea island was valued at nearly twice the price for South Carolina upland cotton), sea-island cotton was far more expensive to gin. In 1900 in the three Atlantic ‘sea island’ states, upland cotton cost about $1.40 per bale to gin; sea island cotton ranged from $4.50 per bale to gin in Georgia and $10.50 to bale in South Carolina.  

During most of the nineteenth century, cotton was exported as lint fiber to cotton mills for use in textiles and further processing, and these mills were usually located in Europe, the American North, and in rare instances, the American West. However, a Southern belt of cotton mills developed near the turn of the twentieth century. By 1900, more than 350 cotton mills existed throughout the South, employing nearly 90,000 workers. The impetus for such local industrialization was cost. An 1900 report noted that export costs from Southern cotton farms to foreign mills averaged about $6.25, from Southern cotton farms to mills in the North about $3.00, and from Southern cotton farms to local Southern mills about $0.25. And other associated industries found strength in Southern industry. In the 1890s and 1900s, cottonseed – a byproduct of normal cotton

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83 1900 United States Census of Agriculture, 1900, p. 416.
harvest – flourished, and cottonseed industries rose in part from the increase in cotton
production throughout the South.\textsuperscript{85}

Eventually, the Southeastern or “Old South” cotton world declined as the
preeminent production region. This decline was most evident in the early twentieth
century. The Georgia-to-Carolina cotton belt had already been surpassed by the
enormous territory dedicated to cotton in Texas and Oklahoma; but within the historic
South, the four-state Delta region also overtook the combined production of the six states
in the Southeast during the 1910s and 1920s. From 1910 to 1930, the Texas-Oklahoma
cotton region increased acreage by 100\%, the Delta region increased acreage by about
40\%, and the core producers of the Southeast cotton region increased acreage by just
5\%.\textsuperscript{86} The steady decline transformed Southeastern cotton from nearly a third of U.S.
cotton yields in 1930 to just one tenth of U.S. cotton yields in 1970.\textsuperscript{87}

Further accelerating the non-Delta Southeast’s production share was the decline
of cotton plantations. In 1910, there were just under 40,000 plantations in the entire
South from Texas to Virginia; in 1940, the region was home to just under 20,000
plantations. A difference in record definitions of “plantation” allowed for the counting of
tenant-worked farms and wage labor-worked farms as a plantation, yet this sharp decline
occurred across the South. However, the end of the plantation world by 1940 was far
more pronounced in the Old South regions. From 1910 to 1940, Alabama lost 75\% of
plantations, Georgia lost 72\% of plantations, South Carolina lost 66\% of plantations, and
Florida lost 88\% of plantations.

\textsuperscript{85} 1900 United States Census of Agriculture, 1900, p. 408.
\textsuperscript{86} Daniel (1986), p. 15-16.
\textsuperscript{87} Combined data from U.S. Census of Agriculture, 5-year reports, 1924-1974.
The above study noted the decline of large cotton plantations from 1910 to 1940 in the “Old South”, the combined Southeastern states. Using this same study period, however, the Delta states largely retained their plantation landscape: instead of losing more than 70% of cotton plantations in this period (as the Southeast states did), Mississippi lost just 16% of plantations, Louisiana lost just 8% of plantations, and Arkansas lost just under 7% of plantations. In essence, while the cotton plantation landscape was long-disappearing in the Atlantic cotton world during the first few decades of the twentieth century, the cotton plantation landscape of the Delta was alive and well in the era of the Great Depression. Some of the measures of “plantation” appear more entrenched because of the counting of wage labor as “plantation” labor by 1940, but the overall characteristics of large farms and many workers accurately described the Delta. The Delta was a region in economic crisis due to the Depression, and it was a region in flux as systems of tenant farming were disappearing, but it would take additional waves of change related to cotton harvest mechanization and post-World War II population movements to completely change the Delta away from its cotton plantation past.\footnote{Data from U.S. Census Bureau reports on population, 1916; 1948. Aiken (1998), p. 67 for more data.}

Why did the Southeast cotton world fall, and why did the Delta take its place as a productive core? Aiken identified a major cause of productive decline in this eastern part of the South as not arising from pestilence or soil exhaustion or tenancy, but rather due to “management failure” of individual plantations. Management had little oversight of tenant production methods. An even greater management problem was the increasing appearance of absentee landlords. As the owners and funders of most of a plantation chose to live in the growing cities of the interior South, including Atlanta and
Birmingham, wasteful inefficiencies plagued cotton production in the Southeast. While this argument is important, it is too particularistic, and Aiken underestimates the detrimental environmental situation of the Southeastern soils that were long sapped from extensive cotton production by 1900.

In 1930, the Mississippi Delta region had become the core of American cotton production. The details of internal efficiencies and challenges of the Delta – of internal comparative advantages and disadvantages of continued production – will be thoroughly addressed at both regional and local scales in the entirety of Chapter 3, but a few important overview points relating to Delta cotton, and to the Delta “tipping point” at the beginning of the Great Depression, are necessary.

In the early twentieth century, the Delta was not the largest production area, but it was the most productive area. By 1930, the Delta's 10.8 million acres yielded more cotton bales than Texas' 16.8 million acres, and the Delta states had a greater bale yield than every other non-Delta, non-Texas Southern state combined. The average farm size in the Delta was extremely small, compared to other agricultural regions (including cotton agricultural regions) in the country. In 1930, the typical Delta sharecropper farmed no more than 15 acres on a rented farm. This very small farm size meant that the Delta had a correspondingly very high number of farms in any given cotton agriculture area. Thus, the Delta was a dense agrarian landscape. Among U.S. regions, the Delta possessed the highest density of farms for some time after tenant farming declined en masse, even throughout the 1950s.

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90 Sargen (1979), p. 30. In 1954, using Census of Agriculture data, there were about equal numbers of cotton farms and “cash-grain farms” in the United States, with around 530,000 of each type. No part of the
Specifically, the landscape of Delta cotton began its turn away from a dense rural small-acreage tenant farming world of hand-picked cotton in the few years before and after 1930. The years around 1930 represented a tipping point in the overall economic structure of the Mississippi Delta. 1930 was not the first era of economic crisis, but it was the culmination of rapid-fire shocks after decades of built-up economic pressure. In 1926, for example, total cotton yield was at a then all-time high, but the price of cotton fell to less than thirteen cents. As increased output merely resulted in more of a crop to sell at rock-bottom prices, cotton growers in the 1920s had little motivation to acquire larger farms or push for production of higher total bales. The 1920s represented a decade of uncertainty in the Delta, and the region’s cotton belt was nearing a breaking point towards some sort of structural collapse. The Great Depression proved to be that breaking point.

Hardships were associated with cotton production across the South around 1930: in 1928, rising prices, high demand, and (relatively) low supply led to U.S. cotton farmers earning a direct income that year of $1.5 billion. Just four years later, in 1932, drought, flooding, market collapse, price declines, and production oversupply of “carryover” bales led to U.S. cotton earning a direct income of just $500,000. By 1932, cotton production appeared to be a net financial loss for virtually all cotton producers.91

While the particular mix of climatic conditions allowed most of the Southern “half” of the United States to be potential cotton-growing land, as late as 1910 the most western site of any real production in the country was in Oklahoma and Texas. Because the lands from New Mexico to California were potentially cultivatable for cotton, in

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essence, the cotton belt of 1800, or even 1900, was smaller than its theoretical maximum. This developmental potential gave way to a westward move of cotton throughout the twentieth century in particular. More so than the American corn belt or wheat belt, the cotton belt could be extended West with minimal irrigation and infrastructure upgrades. This westward trend was evident: in 1900, the ten leading cotton-producing states (in order of overall yields) were Texas, Georgia, Alabama, Mississippi, South Carolina, Arkansas, Louisiana, North Carolina, Tennessee, and Florida – the entirety of the Confederacy minus Virginia. By 2000, state production was still important in the Old South, but California, Arizona, New Mexico, Texas, and Oklahoma accounted for just under half of the total yield and acreage of American cotton.

These western states possessed many production-related advantages that the Delta and eastern states lacked. Costs of production were lower, land was often cheaper, the infestation of the boll weevil was less pronounced, and the lack of a dense system of entrenched tenant farmers meant that western farmers could experiment with more efficient processes (such as the earliest wave of mechanization, tractorization, in the 1910s and 1920s).

Cotton production’s general westward movement in the United States is also owed to the comparative advantages and comparative efficiencies of the more recent entrants to the cotton realm, as late adopters of cotton used only the most recent, efficient methods to farm. Cotton farms that were located farther westward used more machinery with better labor practices than those immediately eastward, resulting in a higher per-acre

92 1900 United States Census of Agriculture, 1900, p. 408. These ten states combined for just over 20 million acres of cotton production.
value of production in each successive cotton region to the west. This pattern of the more western farms – the latest entrants to the cotton market with the most recent labor or machine advances – possessing comparative advantages over their eastern predecessors was also seen in historical geographies of the rice production. In 1910, Carolina rice produced 8 acres of rice per worker, with an average labor cost of over $12 per acre. In comparison, in 1910, Texas and Louisiana rice produced 80 acres of rice per worker, with an average labor cost of just under $3 per acre.\textsuperscript{95}

Some of the production moves of cotton to the western United States were not related to human factors, but natural ones. The spread of the boll weevil across the cotton South devastated cotton crops in various states until the 1920s, which accelerated the move of cotton production westward across the U.S., where the climate and environmental conditions made the crops and soils largely weevil-free. Daniel argued that “the center of cotton production would have shifted westward anyway, as it always had, but the weevil ‘accelerated the process’.”\textsuperscript{96}

Texas and Oklahoma cotton production had a longer history than did the production of the near-Pacific states, so the details of this “Texahoma” region must be addressed before the rest of the cotton-producing states in the American West. Cotton production had existed in Texas before the Civil War; in fact, strands of Mexican production carried out since antiquity were adopted by the Spanish and planted near San Antonio as early as the 1740s. However, mass cotton cultivation occurred after 1820 by Anglo-American colonists as part of a wider westward spread of cotton throughout the Southern portions of the Gulf Coast states. By 1850 the state ranked in the top ten

\textsuperscript{95} Aiken (2010), p. 132.
\textsuperscript{96} Daniel (1986), pp. 7, 15.
cotton-producing states, but it was not until the post-Civil War advent of barbed wire and westward railroad-building that production rapidly increased, from about 60,000 bales in 1849 to 800,000 bales in 1879, when it was the state with the greatest level of cotton production.\textsuperscript{97}

Although a hypothetical arc of westward cotton production would suggest that Texas cotton ought to have developed far later than the 1880, that period is actually “later” than might be expected, as eastern Texas was part of the wider economic region of the antebellum and Confederacy South. Cotton production existed in the lower regions of Mississippi and Louisiana (far south of the Delta) in the mid-nineteenth century, so what could explain the delay in cotton’s spread to near-coastal Texas?

Transportation challenges of the specific physiography of the region seemed to play a central role. The railroad-based transportation routes associated with nineteenth-century cotton production in the South faced major problems bridging the many non-navigable inland rivers in Louisiana and particularly in Texas.\textsuperscript{98} These western Gulf states have many wide, long rivers emptying directly into the Gulf of Mexico rather than the Mississippi River, creating the need for several bridges or ferries to enable overland trade routes.

Until railroads connected much of Texas after the Civil War, such transportation was extremely difficult. As a result, Galveston and Houston eventually gained a great deal of importance as centers of Texas’ cotton export in the late nineteenth century. Yet, the land was not perfectly suited for export without additional development: both of


\textsuperscript{98} Because these rivers were not navigable far inland, railroad routes were necessary for large-scale cotton export. See Hugill (1993), p. 85.
these cities required a complete re-dredging and re-forming of their respective deepwater harbors around 1900 to accommodate the increasing sizes of more modern export ships at the turn of the twentieth century.\textsuperscript{99} The most expansive production ramped up in that state in the 1890s – Oklahoma and Texas accounted for 89\% of newly-planted cotton acreage during this decade, with an increase of 3 million new planted acres during the 1890s in Texas alone.\textsuperscript{100} Because of the enormous size of Texas, it could sustain a greater acreage of cotton than South Carolina or Louisiana, and by 1900, Texas was the leading cotton producing state in the United States.

Cotton continued its movement west across the United States in the early twentieth century, even as the Delta South was still productive, covering millions of acres of cotton farms (Figure 2.4). Total national cotton acreage increased during the 1920s, but it increased a particularly rapid rate in Oklahoma and Texas.\textsuperscript{101} These states plus New Mexico, Arizona, and California saw a combined gain of nearly 8 million acres dedicated to cotton production in the early 1920s. Although some of this acreage was lost in the initial years of the Great Depression, cotton production was clearly moving west.\textsuperscript{102} After a relative Texas decline and Delta dominance in the 1930s, the core region shifted back to Texas and Oklahoma immediately after World War II, with about 40\% of national output produced in those two states. The westward shift was not simply state-to-state, but also within states: before about 1930, Texas cotton was synonymous with production in eastern or central Texas. After 1930, Texas cotton increasingly meant

\textsuperscript{100} By 1899, Texas cotton production accounted for 25\% of the nation’s total yield. 1900 United States Census of Agriculture, 1900 pp. 406, 412. Production rose to 1.5 million bales by 1889 and to 3.5 million bales by 1900.
\textsuperscript{101} Holley (2000), p. 57.
\textsuperscript{102} Daniel (1986), p. 22.
production in west Texas, the Texas High Plains (the “Panhandle” region) or the Rio Grande Valley at the southernmost tip of the state.\footnote{Karen Gerhardt Britton, Fred C. Elliott, and E. A. Miller, “Cotton Culture,” Handbook of Texas Online, <http://www.tshaonline.org/handbook/online/articles/afc03>, accessed 10 Mar 2013. Published by the Texas State Historical Association.}

Texas is the state with the largest production of cotton, and has been so for the entire twentieth century. The massive potential acreage of a large state with most in-state subregions suitable for cotton should make this supremacy unsurprising, but the sustained dominance is important: in 1981, for example, Texas cotton produced more than 36\% of the entire national crop, spread over 17 different cotton-producing states.\footnote{State data from “Appendix table 7--Upland cotton: Production by State, 1965/66-2011/12”, United States Department of Agriculture, National Agricultural Statistics Service, 2011-2012.}

Figure 2.4: Cotton production in 1919, U.S. Census of Agriculture. Each dot equals 4,000 cotton bales harvested. Map produced by U.S. Census Bureau for 1920 U.S. Census of Agriculture
But cotton production moved west further still (Figure 2.5). Production in California, Arizona, and New Mexico (but particularly California) was miniscule until 1945, but then increased rapidly, and by the 1970s, cotton production was dominant in the American West. In California, long-staple “Pima cotton” found fertile soils, a farm system largely unblemished from the effects of tenancy, and farmers more willing (and more financially capable) to invest in mechanization. And in Arizona, a largely federal-supported irrigation project in the central part of that state enabled the less-humid landscape of the West to support widespread production. Towards the end of the 1960s, a massive set of regional shifts were occurring among all four major U.S. cotton regions. Both Texas cotton and Delta cotton were declining as a share of their former national-leading outputs. Far West cotton was increasing to become the dominant production

Figure 2.5: Cotton harvested, 1974 U.S. Census of Agriculture. Each dot equals 5,000 acres of harvested cotton. Map produced by U.S. Census Bureau for 1974 U.S. Census of Agriculture.
region. Southeast cotton continued its steep decline to less than 10% of U.S. output, effectively disappearing from the late-twentieth-century cotton landscape.

Cotton in the U.S. Far West has a long history: cotton growing flourished in Mexico for hundreds of years, so California production of cotton was possible. But California production was so slow that the state legislature offered substantial prizes throughout the 1850s and 1860s for cotton farmers reaching certain benchmarks of production. Some of these Mexican links of cotton production found their way into California fields. The “Acala” cotton variety that was grown in California in the World War I era made its way via cultivation and seed export from Acala, Mexico to San Antonio; from San Antonio to Oklahoma; from Oklahoma (and nearby Red River lands of Texas) to the San Joaquin Valley in California.\(^{105}\)

One of the earliest cotton gins in California’s Imperial Valley was established in 1918, by proprietors moving from West Texas cotton lands. A United States Department of Agriculture Research Station was established at Shafter station near Bakersfield, California in 1922. Additional development of the industry was slow, particularly because of access to capital. Direct loans to farmers were rare in the immediate post-World War I period, so many California cotton farmers were loaned money from local cotton ginning companies. Moreover, all of California was not equally suitable for production. In particular, widespread drought hit California’s Imperial Valley in 1925, and many Southern California cotton farmers migrated north to the state’s Central Valley. The cotton hearth had moved once again, albeit within the same state.\(^{106}\)


Hart tells the success story of a California cotton grower that could be retold for cotton farmers throughout the Far West. In the late 1930s, a farmer in the Central Valley bought 160 acres of “sagebrush and desert shrub”, drilled a well and put in irrigation pumps (with all equipment purchased on credit), and was so successful he farmed 640 acres of cotton the next year. By 1945, the farmer owned 3,000 acres of many crops (including a profitable cotton sector), and owned an on-site cotton gin. In the 1950s the same farmer purchased additional acreage in Arizona to expand cotton production.\textsuperscript{107}

The trend towards fewer farms that were larger in size was a phenomenon throughout American agriculture in the late twentieth century, and this push towards larger farms was an effect of the westward move of cotton production. Profits were higher and production more efficient on larger farms, so the average larger cotton farms in the American west were comparatively more successful than those of the American South. There were still smaller “family farms”, but these farms collectively amounted for less and less of a state or region’s total output. In California in 1985, 91\% of farms earned less than $500,000, but the total gross sales of the other 9\% of farms (those earning more than $500,000) comprised 73\% of the total gross sales on all California farms. Agriculture was layered, with the few large, rich farms serving as the most financially important firms.\textsuperscript{108} And in the west, even the definition of “family farm” was misleading: in contrast to the 15-acre plots of Mississippi sharecroppers, by the 1980s, a comprehensive 1986 study of California family farms found the median “family farm” size at about 480 acres.\textsuperscript{109}

\textsuperscript{107} Hart (2003), p. 56.  
\textsuperscript{109} Chandler (1987), p. 18. The 375 average acres excludes the varied sizes of “livestock”-associated farms. Some cotton farms were much, much larger: California’s Harris Ranch owned 15,000 acres by the
The landscape of cotton production changed in California, moving towards larger economies of scale and lower-cost efficiencies: for example, the total number of cotton gins declined from about 300 in the early 1960s to about 75 in the early 2000s. As many California gins were cooperatively owned by cotton farmers, a lower number of gins represent a smaller percentage of gin “owners” among cotton farmers, removing the risk of gin ownership from those farmers’ financial situations (Figure 2.6).¹¹⁰

The environmental conditions of California cotton were beneficial for production. The state’s “near-perfect” climate for optimal cotton production included “warm springs, hot summers, dry falls, and wet winters.” These conditions have led to an exceptionally productive type of cotton grown in California. Both upland and pima cotton farms in the state have above-average yields: by 2000, the average California cotton farm planted over 500 acres of cotton, with yield-per-acre that was over twice as high as the United States average yield-per-acre. Ancillary jobs of the cotton economy exist beyond the farm. For example, by 2000, when California had just 1,400 cotton farms, a total of 20,000 workers found employment with some sort of cotton-related industry, including warehousing or storage, ginning, cottonseed oil milling, or textile milling.¹¹¹

California production increased throughout the twentieth century: from no production in 1900 to 50,000 bales in 1920 to 250,000 by the era of the Great Depression (Figure 2.7). However, the post-war gains were remarkable: California cotton quadrupled in the late 1940s, and began steady increases (minus a temporary decline in late 1990s, with cotton the principal crop (the ranch maintained an on-site cotton gin), but, typical of late twentieth-century large-scale cotton farms, Harris Ranch was not solely devoted to cotton production; the ranch produced 33 different crops in total. See Hart (2003), p. 58. ¹¹⁰ “California Cotton Questions & Answers.” Calcot Cotton Marketing Services. 2009. Accessed 10 Mar 2013 <http://www.calcot.com/ourcotton.asp? > ¹¹¹ “California Cotton Questions & Answers.” Calcot Cotton Marketing Services. 2009. Accessed 10 Mar 2013 <http://www.calcot.com/ourcotton.asp? >
Figure 2.6: Composition of cotton gin owners by U.S. region, 1935. 1945 U.S. Census of Agriculture.

Figure 2.7: Cotton bales produced in California, 1899-1974.
the late 1960s) to the 1970s. After the mid-1970s, California yields have declined somewhat, but are still nationally-important as the second-largest cotton producing state in the country behind Texas.

In contrast, a particular type of western cotton flourished called Pima cotton, especially in the newly-planted cotton fields of Arizona. American Pima cotton was bred as a hybrid from long-staple Egyptian cotton around 1910. During World War I, extra-long-staple cotton was in high demand as part of tire or fabric production related to the war effort.\(^{112}\) Thus began an Arizona “cotton boom”. Manufacturers of tires in particular took advantage of the stronger long-staple cotton for use in production, and industry followed the fields: Dunlap, Goodyear, and Firestone established factory sites in the states. In 1917, Goodyear built the “company town” of Goodyear, Arizona to house its industrial workers. Prices for cotton surged around 1920, and business was booming, but these gains were short-lived. An oversupply of cotton production led to a price crash in the early 1920s, and the Arizona cotton boom was over.\(^{113}\)

However, Arizona cotton production continued. By the 1960s, that state was the sixth-largest cotton producing state in the country, with more bales produced than Oklahoma, Georgia, or either of the Carolinas (1965 production in Arizona actually doubled the total bales produced by Oklahoma.) However, Arizona cotton entered a period of decline in the early 1970s. A resurgence of production occurred by the early 1980s, and the height of cotton acreage in Arizona was reached around 1982, when Arizona planted on over 630,000 acres and produced nearly 1.3 million bales. Cotton

\(^{112}\) Rose, Jaimee. “Arizona’s Cotton Truly is King.” The Arizona Republic. 06 Dec 2008.

production is in the southern section of that state, concentrated south of Phoenix, far away from the Grand Canyon or the historic realm of the Navajo people in north Arizona.

By 2000, Arizona had fallen to the position of eighth-largest cotton producer in the country, trailing the Delta states of Mississippi, Arkansas, and Louisiana. The reason for this comparative decline was not because of a decline in Arizona bale yields – Arizona yields were either unchanged or increasing in this period – but rather because Delta states were able to rebound with increased yields, likely due to their own production efficiencies after mechanization of picking, the end of tenancy, and the modernization of gin and harvest processes. ¹¹⁴

Upland cotton, long dominant in the South, eventually dominated the West as well. By the twenty-first century, the long-staple “Pima” cotton accounted for just under 4% of American yields; short-staple upland cotton was nearly synonymous with American production. ¹¹⁵ Most American Pima cotton has moved to California's San Joaquin Valley from Arizona, but there are still important economic and cultural associations of cotton in Arizona. ¹¹⁵ Even in California, the historic home of Pima cotton experimentation, upland cotton outnumbered Pima cotton nearly three-fold in bales produced and acres planted after 2000. ¹¹⁶ The vast majority of California cotton is produced in the inland San Joaquin Valley, part of the larger interior Central Valley. The strongest areas of production are the counties of Fresno, Kings, and Kern, about midway between Los Angeles and San Jose. ¹¹⁷

¹¹⁵ For example, an image of cotton exists on the state seal of Arizona. Rose, Jaimee. “Arizona's Cotton Truly is King.” The Arizona Republic. 06 Dec 2008.
At the end of a twentieth century of U.S. cotton movement westward – in addition to a nineteenth century of U.S. cotton development – it is beneficial to remember that production cores shifted ultimately for economic reasons. One particular region, be it the Southeast, the Delta, Texahoma, or the California-dominated Far West, possessed some particular comparative advantage to maintain cotton supremacy, and only lost that national dominance when local conditions became disadvantages compared to other production regions (Figure 2.8).

And these shifts had clear economic effects: a century’s worth of cotton’s expansion resulted in a fantastic increase in productivity for cotton production in the entire United States. In 1900, 9.5 million bales of cotton were harvested from 24 million acres; by 2000, 17.1 million bales of cotton were harvested from just 12 million acres. By the early 2000s, each acre in the United States could produce more than three-and-
half times as much cotton as it had a century before. Because of the progressive nature of advancing yields with better technology, those American areas settled first and cultivated first had the lowest form of technological and environmental management, leading to a cascading westward move towards cotton fields without sapped soils, or without tenancy, or without farms that required overwhelming irrigation, and so on. The westward move was not predetermined due to ecology. It was the set of comparative inefficiencies, mainly due to inferior technologies, of each potential cotton region to the east that ultimately pushed cotton production to the west.

It is in this larger world of cotton production slowly expanding – and thriving – more and more across the American landscape, that the cotton world of the Mississippi Delta is situated. The Delta had particular histories and local geographies and systemic hindrances to economic growth and important natural resources; these local advantages and disadvantages to growth are discussed at length in the next chapter. However, the cotton world of the Mississippi Delta was connected to a wider world of cotton, and Delta changes ought to be seen in wider contexts. There absolutely were local-scale internal economic processes that affected the Delta and the Delta alone; but as an agrarian economic region, the Mississippi Delta was part of a wider world of cotton production. The next chapter identifies the local-scale production characteristics affected by this wider production sphere.

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Chapter 3: Comparative (Dis)advantages of Delta Cotton Production, 1930-1970

Rupert Vance’s 1929 work Human Factors in Cotton Culture; a Study in the Social Geography of the American South opened with a poignant quote by Dorothy Scarborough: “Cotton is the master of them all... all men in the South are slaves of cotton, subject to its power, prospering as those white fields flourish, and failing as they fail.”¹ From Vance’s position, writing at the end of the 1920s, the future supremacy of the Delta’s cotton industry was indisputable. However, as the core “cotton belt” of American cotton production moved steadily westward over the subsequent four decades, the Mississippi Delta cotton core experienced a revolution of production, social power, urban systems, and land.

The previous chapter examined the wider geographical trends of cotton production throughout the nation and globe over the past two centuries. The history of shifting production regions followed an expected pattern, as a “core” cotton region developed in places that allowed the greatest production with the lowest costs. Regions that one time were primed for peak production were superseded by farm belts that could deliver more cotton more efficiently: the Southeastern cotton belt of Georgia and South Carolina declined in relative production importance to the Mississippi Delta cotton belt.

These shifts were caused by reactions to comparative advantages and comparative disadvantages of cotton belts “old” and “new” – the advantages of the newer cotton hearths and the disadvantages of the former ones. Georgia and South Carolina had

exhausted soils from overproduction of cotton, and the Mississippi Delta offered richer soils and better transportation connectivity.

And comparative advantages and disadvantages surfaced in different regions at different times. Indian cotton production per bale was more expensive than Delta cotton in 1900, but less expensive per bale than Delta cotton by 1970. California was too dry and too disconnected to sustain cotton production in 1870, but an irrigated, mechanized California cotton landscape connected by cheap rail, truck, and ship transportation networks was a center of American cotton production after 1970. Likewise, the Mississippi Delta cotton region, an American cotton “core” in 1930, saw its productive advantage supplanted by other national and global producer regions. Much of what made Delta cotton production cheap and (comparatively) efficient before 1930 – labor arrangements, farm characteristics, environmental qualities – became distinct economic disadvantages in the following four decades as other regions changed into more advantageous efficient cotton cores.

This chapter examines in detail the specific comparative advantages and disadvantages possessed by the Mississippi Delta region from 1930 to 1970 with respect to cotton production. Environmental challenges (including poor soil quality, cotton monocropping and overproduction, and pathogenic infestation), a regional delay in mechanization, small farm size (the fixed cost of a tractor, for example, was the same price for a farm of 10 acres or 100 acres, yet the smaller farm had comparatively less income from its smaller production output), and low rates of farm ownership all had effects on the eventual movement of America’s cotton core westward away from the Delta. Some of these comparative disadvantages had disappeared by 1970, but by that
point, a shifting cotton core across the country coupled with local economic decline in the region was inevitable. For instance, Arkansas cotton was 95% mechanized by 1969, but California cotton had reached that mechanization level a decade prior, and had the majority of its crop picked by machine since 1951: by 1970, the “advantage” of mechanization of cotton-picking in the Delta was achieved too late to create local economic growth around first-mover adoption of cotton technology.

This chapter also argues the particular comparative disadvantages of land ownership and land parcel size on cotton farms in the Delta. After 1930, Delta cotton farms were too small and too often “rented” as tenant farmers in comparison to the large, commercial cotton farms that increasingly covered a wide swath from west Texas to central California. A particular investigation of land parcel geographies of some representative Delta places will be addressed, as different cotton places adapted to wider changes in different ways depending on nearby urban hierarchies or labor pools. It should be stressed that it was not the Delta’s particular patterns of land that “caused” the entirety of that region’s sweeping changes by 1970; rather, land arrangements were one of many comparative disadvantages hindering sustained, efficient cotton production after 1930. Local-scale analyses of primary land parcel data are important to demonstrate the detrimental effects of Delta land division before, during, and after the 1930-1970 period, but even then such land-based analysis uncovers only one component of Delta-wide regional economic change.

In addition, the economically disadvantageous systems of tenant farming and small farm sizes did not disappear randomly; these were cumulative effects of the Great Depression, World War II, mechanization, and outmigration. Studies of land are
important for agrarian farm-based research because the spatial unit of the farm is the smallest comparative areal unit possible, but micro-scale investigations of “one farm” or “one plantation” are not alone the only evidence of a diminishing cotton Delta in a wider world of westward-moving and global-moving cotton.

3.1 Environmental Challenges of Delta Cotton Farms

The Mississippi Delta region possessed many environmental challenges for sustained cotton production over many years. Human intervention of the Delta’s ecology existed for thousands of years in a Pre-Columbian context, yet the activity with the largest scale and greatest impact was the nineteenth-century clearing of the Delta bottomlands in modern-day Mississippi. The Yazoo Delta, the heart of the Mississippi Delta in northwest Mississippi, was a tree-covered swampy region until arriving white settlers and black slaves drained the swamps and cleared the forests beginning in the 1840s and 1850s (though clearing was slow and sparse until the 1880s). Historically, the old-growth forest coverage of thick hardwood forests enveloped the entire alluvial plain on either side of the Mississippi Delta cotton core. At the time of initial European colonial conquests, bottomland hardwood forests extended inland along either bank of the Mississippi in a wide swath stretching from New Orleans to Cairo, Illinois.

This multi-decade process of the clearing of the land in Mississippi is compelling evidence of on-the-ground legacy of the plantation landscape: at the time of its clearing,

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2 Contemporary maps of this era label much of this swampy region as “sunk lands” or “bottomlands”.
3 This clearing of the bottomlands included environmental shifts beyond mere removal of hardwood forests; enormous swaths of land covered by cane were converted to cotton farms. Cane breaks survived in the Delta in the 1930s, but only as a fraction of their former coverage. Stewart (2007), p. 59, 69-70.
4 Saikku (2005), p. 87.
the Yazoo Delta was generally untouched by the built environment of (white) settlement, leaving the region a “blank slate” for development. As it was not until the 1880s and 1890s that the “cleared” Delta began to emerge, the infrastructure and economic apparatus that arrived in the newly cleared Yazoo Delta in Mississippi was the post-Civil War plantation-and-sharecropping landscape. The first non-Native enduring human layer of landscape morphology within the Delta’s eastern bank of the Mississippi was the cotton plantation, whose effects directly shaped the twentieth-century Delta.\footnote{It should also be noted that the late nineteenth-century Delta experienced a temporary wave of ex-slave black farmers, whose descendants were forced to turn to sharecropping after the various crises of falling cotton prices around the turn of the twentieth century.}

Such tabula rasa arrangements within the Mississippi Delta are compelling for studying theories of development or expansionary growth. Plantation-style cotton production did not simply “arrive” upon pre-existing layers of the built environment; rather, both the small farms and the plantations were the “first” and only on-the-ground structural creations in the post-swampy Delta (Figure 3.1). Particularly in the Deep South states, both the climate and soil posed challenges for non-cotton farming attempts throughout the region’s history. Experimentation in raising livestock in the high-temperature and high-humidity Deep South proved disastrous with ecological disruptions ranging from poor milk production by cattle to increased spread of disease by ticks.

In particular, infestation of the boll weevil spread from Texas in the 1890s to complete coverage of Mississippi in the 1910s. The weevil further spread through the wider South by the Great Depression, continuing to threaten cotton production and profitability, with current estimates of the total damages of the weevil on local agriculture at over 13 billion dollars.\footnote{Adjusted for inflation data from Mississippi State University.} Widespread infestation of the boll weevil across the entire
South in the 1920s led to subsequent decline in land values and economic productivity.\(^7\)

Eradication of the boll weevil became a major objective of efforts by the U.S. Department of Agriculture, signaling one of the first major interventions of federal governmental apparatus into southern agriculture (or the South) since Reconstruction.\(^8\)

As the boll weevil spread across the South, many cotton farmers turned to (often failed) attempts at crop diversification to minimize future losses: growing crops other than cotton was seen as a sensible way to hedge against risk.\(^9\)

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\(^7\) Lange et al (2009).

\(^8\) Daniel (1986), pp. 4 - 10.

For the half-century before the Great Depression, the Delta seemed destined to produce cotton and cotton only; yet this same destiny resulted in a pernicious paradox, as continuous cotton monocropping degraded the Southern soils nearer to environmental (and therefore economic) ruin in so few generations. Cotton production was very damaging to soil due its propensity to absorb and extract high quantities of available nutrients and moisture below and at ground level. Soil exhaustion was a serious problem faced by moisture-sapping cotton plants in other production regions. In the Atlantic Southeast, evidence of cotton’s soil exhaustion was realized by decreased yields by 1830. Here, the availability of more land at similar latitudes (and therefore climates) led to an understating of any long-term ecological effects. Hugill summarizes this process, noting that “slaves were portable wealth that could easily be moved to a new production region further west.” But as the core Delta region (especially in northwest Mississippi and east Arkansas) was a largely post-Civil War landscape, relocating farms with secure labor pools was more difficult, and Delta farmers worked the same soils growing cotton.

Another challenge was the vitality of the soil in the Delta. Historically, the Delta South’s arable farmland was of poor soil quality compared to the Upper Midwest and the Ohio Valley, as the highly acidic ultisol soils native to the American South were far less

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11 Hugill also notes that this soil exhaustion created an incentive for slave owners in the southeast to transition from cotton production to slave “breeding” for their major sources of income. Hugill (1993), p. 82.
12 Hugill (1993), p. 84. Hugill argues that U.S. cotton production was not highly profitable because slaveowners “emphasized the value of slaves rather than land.” Slaves were measured as a marketable asset – an asset that, for an individual “prime field hand”, increased in value nearly four-fold from the 1830s to the 1860s. Hugill (1993), p. 82-83. Also see Wright (1978), p. 129, 149. Wright addresses that this de-emphasis of the economic importance of land meant that fewer region-wide transport or infrastructure improvements were constructed.
fertile than the alfisol soils of the Ohio Valley or the great mollisol soils of the
Midwestern Plains states.

Low fertility of soils in the wider South has many causes. Climatic conditions
and historical environmental factors have lowered the level of equivalent “neutral” pH
level below the 7.0 pH measured laboratory conditions; a general acidic trend exists for
most Southern soils. Helms noted that the “optimum range” for general vegetation
growth in the South, due to soil conditions, is actually “slightly acid”, ranging from a pH
of 6.1 to 6.5, and a neutral equivalent pH in the South can range from 6.6 to 7.3.13 Much
of the Delta contained alfisol or vertisol soils, in contrast to the extremely low-fertility
ultisol soils of the wider South, yet the alluvial Delta soils were still far less fertile than
the mollisol soils of the Midwest. When compared to these high-producing soils of the
Ohio River Valley or Upper Midwest, the comparatively less-fertile Delta soils led to
another environmental challenge: the inability to maintain continuous crop cultivation on
specific parcels of land. The necessity of rotating and cycling a different patch of land
for cotton cultivation within a given timeframe, meant that successful Delta farms
ultimately required more land in total (including temporary fallow land) than Northern
farms. 14

While Delta soils were of better quality than the rest of the South, this divergence
led to further degradation of the cotton core. Precisely because soil quality was generally
worse beyond the alluvial Delta, the need to cordon off the alluvial soils for cotton

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14 The effects of cotton production on Delta soils have legacies that extend until the present day. In the
early twentieth century, many fertilizers used in cotton agriculture contained arsenic. By 1970, when many
Delta farms had changed production from cotton to rice, the soils were still concentrated with derivatives of
that same early twentieth-century arsenic. In the modern era, Delta-cultivated rice has become a major
ingredient in domestically-manufactured “organic” baby formula. The specific “brown rice syrup”
ingredient used in baby formula showed high enough levels of arsenic concentration to spark national
growing was extended. There were simply no alternatives for widespread cotton
production in Delta states beyond the land near the Mississippi River, certainly not in the
piney woods or hill country, “where soil was thin, eroding, and unproductive.”

Cotton also required a longer growing season than traditional Midwestern crops
such as corn. Similar factors prevented crop diversification in the region, as limited
land and extended production seasons kept Delta farms crowded with cotton growing.
Non-cotton market participation by farmers in the wider South occurred during the mid-
twentieth century, but the rates of total crop diversification were miniscule compared to
cotton production. Ayers discusses this failure to diversify, quoting a Georgian farmer
named James Barrett, who lamented, “I have diversified, and I have not made any money
by diversification... I have raised horses, cows, and hogs, and I have diversified it for the
last three years and have not been able to make a dollar.”

Cotton monocropping left local Delta farmers more vulnerable to price changes
(such as the historic late nineteenth-century low in 1894 after the Panic of 1893). The
United States Department of Agriculture led efforts to increase diversification of crops,
but their efforts were largely ignored in the Delta before 1930, because of the ease of
local landowners in continuing a system of cotton production that had a labor supply,

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15 Newby (1989), p. 8. Other Delta land can be classified as prairie, which was never sufficient for cotton production, although prairies became the center of rice production in the late twentieth-century. The Grand Prairie is between the White River and Arkansas River in eastern Arkansas. Lancaster (2011).
16 Helms (2000), p. 727. Comparative studies of crop diversity in other American contexts during the period include Sylvester (2009), who exposed the changing structure of rural Kansas agriculture. Sylvester suggested that crop diversity (as opposed to monoculture wheat) was more prevalent in the 1930s than previously theorized – a diversity that was unexpected, because the system of transportation and banking in contemporary Kansas would theoretically encourage a specialized monoculture.
17 A nineteenth-century Southern observer commented, “our country is not particularly adapted to wheat nor to stock raising nor the production of food crops.” J. Pope Brown in Rubin (1975).
19 Rabinowitz (1992) called the shift “a total reversal of the situation in 1879”, p. 8. Ironically, the South’s reliance on cotton monocropping offered some insulation from wider national or global recessions, including the Panic of 1857, with that era’s relatively stable cotton prices.
production apparatus, and commercial market demand already in place. Daniel noted that “cultivation practices changed little for a century and a half.”

At the beginning of the Depression-Era transitions, the natural balance of the Delta was already in flux, due to the Great Mississippi Flood of 1927. More than 16 million acres were flooded across the wider Delta in early 1927, with standing water remaining across Mississippi and Arkansas farms for months, leaving over 700,000 local residents homeless. The Mississippi River had experienced 'big' floods before, including major events in 1912, 1913, and 1922, but no flood was so destructive, with so wide a geographical reach, as the 1927 flood. A network of massive earthen levees were built and rebuilt throughout the 1920s to prevent future deluges. These riverside earthen ridges serve as stark delineations between possible settlement locations and floodplains in the present day (Figure 3.2). After the disastrous 1927 flood, the land suffered an opposite malady: drought. In 1930, in the midst of a nationwide summer drought, the Delta states in particular suffered some of the highest precipitation divergences in the country. Summer rains in 1930 in Mississippi were only 47% of normal average precipitation measures, in Louisiana, 56%, and in Arkansas, just 36%.

During the early twentieth century, the constancy of pressure upon the land of the Delta by cotton cropping slowly deteriorated the future sustainability of soils in the wider alluvial Mississippi plains. In the 1920s alone, disastrous flooding of the Mississippi, sub-optimal soil quality, and deleterious economic effects of the boll weevil exacerbated the consequences of volatility in cotton prices: the Delta farmer in 1930 had battled both

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21 Upshaw et al (2011)
23 See Woodruff (1985).
environment and market. In many ways, cotton was a negative effect on the South’s overall environmental health, yet the economic lure and social hierarchy of production, both slave and postbellum, enabled and encouraged this singular cash crop of the Delta. In short, the land of the Mississippi Delta and its cotton-producing surroundings could not possibly sustain continued mass-cotton production in the midst of a flooded, blighted, sometimes infertile landscape of poorer soils year after year.\textsuperscript{25} There were warnings of a

cotton industry collapse. Yet given the region’s natural hazards and endemic risk, an agrarian cotton empire stubbornly marched on and ruled the Mississippi Delta of 1930, either unaware of or unwilling to face these environmental challenges.

The untenable foundation of the environmental Delta was seen in its rapid “creation” in the late nineteenth century by draining bottomlands, clearing land, and building levees along the Mississippi River, which prevented any natural recharge of the soils of this historical floodplain – a floodplain whose acidic soils were sapped of moisture from decades of cotton growing. The massive environmental challenges endemic to the Delta South created a situation where long-term profitability of cotton production (using mass labor) became extremely difficult, if not unattainable.

3.2 Mechanization and Shifting Contours of Cotton Production

In October 1936, the Southern Plow Company of Dallas, Texas sent a letter to Mr. Dan L. Trotter of Natchitoches, Louisiana, informing him of the availability of their preferred model of a “Single Action Clark Disk Harrow” for $32.50. That business correspondence would discuss a disc harrow, a type of farm machine with attached metal discs that plow up and break up clumps of soil when dragged, was unremarkable; what is of importance is that this 1936 note advertised the harrow’s importance in terms of protection, efficiency, and ease provided to the horses that would pull it. Some of the most radical changes that the twentieth-century Delta experienced were technological, where each process of cotton production – planting, maintenance, and harvest – was carried out more by machines and less by the hands of field workers.

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Mechanization of the U.S. South, unlike mechanization of the North or West, occurred alongside a massive shift of farm size (related to the end of tenant farming). Of all the dominant crops in U.S. agriculture, cotton was one of the last crops to fully mechanize production processes. Aiken identifies the adoption of three forms of “modernization” of cotton production as successive in chronology: tractors were heavily adopted from 1935 to 1946; mechanical cotton pickers were heavily adopted from 1946 to 1956; herbicides were heavily adopted from 1955 to 1964. The initial reluctance for most Delta cotton farms to mechanize created a regional disadvantage compared to early adopting farms in Texas, Arizona, and California.

Mechanization of cotton is most identified with the revolutionary “mechanical cotton picker” which came into operation after World War II, which made field labor for picking harvested cotton largely unnecessary. However, previous waves of mechanization also influenced the changing cotton Delta. Cotton ginning, for example, required power to move the mechanical parts of the gin. In the nineteenth century, cotton gins were powered by harnessed mules; later gins were eventually steam-powered. This transition did not simply change how ginning worked: by decoupling mules from ginning complexes, a gin company could spend less on feed, housing, and veterinary care for its mules. At each step of cotton’s mechanization, economic efficiencies increased, allowing for greater potential profit.

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27 This Southern shift has been described as a major “restructuring” of the local economic geography. Sargen (1979), Preface.
30 Similar transitions occurred for other early attempts of cotton technology, including the “cotton press” machines.
But, by 1930, the greater Mississippi Delta was by and large an un-mechanized agricultural world, and cotton remained one of the most un-mechanized crops. Writing from the Mississippi Agricultural Experiment Station in 1945, Frank Welch noted that “Prior to World War I, about the same amount of labor was required to produce a pound of cotton as in 1860.”

That cotton could be picked by machine, and not hand, was initially greeted with skepticism by local farmers – an understandable skepticism grounded in years of failed promises of mechanical solutions. Various cotton pickers had existed for some time (a “spindle-type” picker was patented by Angus Campbell in 1895), but none had proved commercially successful. Industrial experimentation had occurred a generation before World War II. International Harvester had worked to build a mechanical cotton stripper (which picked the entire boll – or entire stalk – in a rough, “stripping” fashion) in the late 1910s.

Wartime pressures of labor supply were apparent in the midst of a World War I-inspired labor shortage, so these early attempts to mechanize were not seeking greater efficiency, but simply seeking to continue producing cotton with each harvest. But picking in particular seemed too difficult to automate. The 1900 U.S. Census of Agriculture lamented that “the items of chopping [removing weeds] and picking constitute the greatest expense of cotton culture, but the nature of the work almost completely destroys the hope of ever diminishing the cost of such items by the use of machinery.”

These fears would prove unfounded.

The first wave of change in cotton mechanization was adoption of the tractor. Sargen noted that the tractor was undoubtedly “the major innovation in U.S. agriculture

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31 Welch and Miley (1945), p. 928.
33 1900 United States Census of Agriculture, 1900, p. 409.
in the first half of the twentieth century.” Early steam-powered tractors were invented by 1860, and numbered over 70,000 on American farms by 1910. These less-powerful tractors were soon overshadowed by gasoline-powered tractors. With greater production of tractors, the purchase cost of tractors fell significantly in the early 1920s, which enabled even greater adoption by U.S. farmers.\(^{34}\) Yet, while American farmers began widespread adoption of the tractor during the 1920s and 1930s, it was not until the late 1930s and 1940s that major waves of “tractorization” reached the Mississippi Delta region, and penetration was slow.\(^{35}\)

A comparative disadvantage of Delta cotton production was its slow adoption of mechanized farm equipment, including tractors. Consider in 1941, an expanded Delta state region possessed just 68,000 tractors, compared to the Corn Belt’s 492,000 tractors, the Great Plains region’s 276,000 tractors, or even the two-state Oklahoma-Texas region’s 153,000 tractors.\(^{36}\) In addition, as a cumulative percentage, tractorization had the slowest penetration in cotton-growing regions among the major U.S. agricultural regions of corn, grain, dairy, and cotton. A targeted Works Progress Administration survey found that in 1930, about a quarter of Delta cotton farms had tractors, compared to a tractor possession rate of over 50% of all corn farms in the Midwest and nearly 80% for small grain areas in the Southwest.\(^{37}\) Total adoption rates of all farms in the region were even lower, with just over a quarter of all Delta state farms possessing tractors as late as

\(^{34}\) Sargen (1979), pp. 85, 157. Specifically the northern Great Plains states had the greatest adoption of tractors during the 1920 and 1930s.

\(^{35}\) Sargen (1979), pp. vi, 2-3, and Aiken (1998), p. 103. Aiken further details the breakdown of increased tractorization on cultivation. Adoption rates followed near-exponential growth, as seen by statistics of tractor power: from 1920 to 1950, the average U.S. tractor’s maximum belt horsepower only increased from 20 horsepower to 30 horsepower. In the 1950s alone, however, the same maximum belt horsepower measure rose from 30 to nearly 60 horsepower.


\(^{37}\) Data from Works Progress Administration, Changes in Farm Power and Equipment: Tractors, Trucks, and Automobiles.
1950. And these regional differences in diffusion and adoption were not borne of various ease of different physical landscapes: a 1936 study of agricultural areas with the same “undulating or level topography” characteristics found that cotton farms – even in western areas of the United States – were only half as likely as dairy, corn, or potato farms to have on-site tractors.\(^\text{38}\)

An important finding in study of tractor mechanization (which has impact on theories of cotton-picker mechanization) was the increasing probability of early adoption for larger farms; adoption positively correlated with farm size.\(^\text{39}\) A landmark study by Kilby and Johnson showed that mechanized farm equipment was far more likely to be adopted by (and found on) larger farms.\(^\text{40}\) Greater costs of investment, as well as greater potential efficiency gains, could only be found on larger farms. This reality represented another disadvantage faced by the Delta, which served as a partial feedback loop. The Delta’s comparatively small cotton farms versus Texas, Arizona, or California meant that mechanization was less likely on Delta cotton farms. Smaller Delta farms also lacked the financial ability or incentive to mechanize. So, Delta farms continued to produce cotton less efficiently, and made less profit than mechanized farms, and therefore had a continued inability to purchase mechanized equipment. Hart noted that a cotton farm in the late twentieth century needed about 250 acres of to justify the purchase of mechanical cotton pickers.\(^\text{41}\)

\(^\text{38}\) See Sargen (1979) for regional and crop-specific breakdown.
\(^\text{39}\) At the end of World War II, just 14% of “Southern” farms possessed tractors, but this figure was 1.6% for farms smaller than 10 acres, 7.9% for farms between 50 and 70 acres, 19.6% for farms between 100 and 140 acres, 44% for farms between 220 and 260 acres, and 67% for farms larger than 1000 acres. See Sargen (1979), p. 25 for an excellent discussion. Data from United States Census of Agriculture.
\(^\text{40}\) Kilby and Johnston (1972)
\(^\text{41}\) Hart (2003), p. 246.
Regional differences of tractor mechanization were apparent: Northern farmers were more likely to mechanize than Southern farmers. Differences in smaller regions were evident: cotton regions to the west adopted tractors at greater rates than cotton regions to the east. In 1939, just 11% of “land breaking” on Delta farms was completed by tractors, compared to 49% of “land breaking” in Oklahoma and Texas using tractors. By 1946, these adoption rates increased to 35% and 82%, respectively. Similar gulfs in mechanization adoption rates between the Delta and the “Texahoma” region appear in measures of disking processes and measures of harrowing processes. The more labor-intensive cotton production in the Delta was increasingly difficult compared to the more machine-intensive efficient production in Texas or Oklahoma; slow adoption of new machinery influenced a Delta-region-wide competitive disadvantage of cotton production.

The Delta was not exceptional in its failure to mechanize or modernize; the Delta was part of a larger non-Texas South that resisted mechanical change and technological implements during the twentieth century, eventually to that wide region’s detriment. However, low adoption rates were not simply a “Southern” problem, they were also a “cotton” problem: in 1950, cotton tractorization in the South trailed adoption rates of dairy farms, poultry farms, and livestock farms in the South.

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42 For example, in 1950, “commercial farms” in the North had tractor adoption rates of 78%, compared to tractor adoption rates of just 36% for “commercial farms” in the South. Sargen (1979), p. 29.
43 It should be noted that the Southeastern states – the antecedents of pre-Delta cotton production in the South – also possessed very low rates of adoption for tractors, disking, and so forth during this period. Thus, the movement away from Delta cotton towards the more mechanized farms to the west was not a specific reaction to Delta changes; rather, the movement of U.S. cotton supremacy to more western venues was a reaction to the not-modernized, manual-labor landscape of the entire Southern cotton realm from Louisiana to Georgia.
44 Tractorization was far less on cotton farms than other American farms. Sargen noted two factors in his statistical look at tractorization, finding that “the tendency for tractors to be associated more frequently with non-cultivated crops (i.e. wheat and maize) than cultivated crops (e.g. rice and cotton), and the tendency for tractors to be used on large size farms.” Sargen (1979), p. 48.
Cotton mechanization was slow because of the Delta’s land ownership arrangements and high degree of “rented” tenant farms. A 1940 study surveyed the finances of Southern cotton farms, and determined that the relationship between landlord and tenant farmers created an imbalance of potential capital inputs. Only the landlord had the capital required to purchase mechanized equipment, and the total costs of mechanizing a landscape with a high degree of division in parcelization, along with the associated inefficiencies of scale related to tenant farming, meant that more equipment was required, and therefore costs of purchase and upkeep were higher. Sargen also notes that because the landlord alone would make these comparatively costlier purchases, the overall risk of default was much higher on cotton farms in the South.45 Even with the increased risk of financial exposure due to the large capital loans associated with mechanization of all of a landowner’s farm (both directly worked and rented out), mechanization did offer a greater potential profit compared to a mule-driven hand-picked Delta farm, as contemporary studies suggested.46 But the significant costs of direct purchase or indirect loan repayments meant that Delta cotton farms faced enormous challenges to mechanize.

In the face of these doubts of machine dreams, a real technological revolution would occur from machine-picked cotton.47 When the Hopson Plantation (located near

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45 Sargen (1979), pp. 241-242. A 1931 document asserted as much, and Sargen raised the additional point that mechanized equipment was often financed with external capital, so the burden of loan repayment created an even riskier situation of default for cotton landowners who attempted to mechanize.

46 A study presented in 1940 by the U.S. Department of Agriculture indicated different amounts of “net plantation income” among farms within the Mississippi Delta region at various stages of mechanization. For plantations operating with sharecroppers and mules, an annual net income of about $4,900 was earned; for plantations operating with wage hands and tractors, an annual net income of about $8,200 was earned; and for plantations operating with wage hands and tractors, an annual net income of about $13,000 was earned. For more discussion, see Sargen (1979), p. 241. Data from “Mechanization, Its Relation to Farm Labor and the Farm Business”, presented to Temporary National Economic Committee, April 23, 1940.

47 See Street (1957) for the most historically influential work on the mechanization of cotton.
Clarksdale, Mississippi), a plantation that had experimented with mechanized picking since the late 1930s, produced the first cotton crop picked entirely using a mechanical cotton picker in October 1944, it was clear that immediately useful technological progress had finally reached the cotton fields (Figure 3.3). Widespread production of spindle cotton-picking machines expanded after International Harvester introduced a mass-marketed model to cotton producers in 1948. The mechanical cotton picker became an important inventory item for farm dealers, and the picker quickly became mass-produced by several national companies, not only International Harvester, but also Deere and Company, and Ben Pearson.

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48 Heinicke (2008), p. 69. This successful cotton picker was all the more noteworthy because International Harvester had spent over 40 years and five million dollars on research and development of mechanical pickers. Street (1957), p. 18.
The mechanical cotton picker changed the cotton industry far more than any other invention. The picker made economic sense: as The Economist explained, “Machine-picked cotton cost plantation-owners $5.26 a bale; a hand-picked bale cost $39.41. Each machine performed the work of 50 field hands. It was no contest.” According to Hopson Planting Company, a single 1940s-era cotton picker would traverse between 4 and 8 acres per day. The long-term effects of cotton mechanization were simple: less labor would be required to pick cotton for future harvest. Less labor meant fewer jobs and fewer Delta residents. Comparatively, the mechanization of Southern agriculture, particularly cotton, occurred much later than similar mechanization on Midwestern and Western farms, due to the inefficiencies of existing labor and land arrangements in the South, including high rates of tenancy.

Mechanization had other benefits for local industry. For example, the manufacturers of agricultural tools often upgraded their wares to include mechanized equipment in local stores, or established workshops to repair and maintain mechanized equipment in those newly-mechanized regions. As mechanization appeared within a region, continued adoption was encouraged by the existence of this local network of machine support. And the rural regional landscape was transformed at the level of individual buildings. As fewer draft animals were used for labor, barns for mules were converted into other uses, primarily storage areas for mechanized equipment. But the primary result of mechanization, especially that of the mechanical cotton picker, was the end of mass labor needed to harvest cotton.

51 Welch and Miley (1945), p. 934.
52 It should be noted that adoption of mechanized pickers, beginning after World War II, was gradual.
Mechanization was both feared and welcomed: various Southerners (holding various positions within the commodity chain of cotton production) simultaneously invited increased productivity for less expense and worried about societal effects of mass unemployment and displaced workers. “Nothing could be more devastating to labor conditions in the South than a cotton-picking machine,” the Jackson Daily News declared in 1936, after the first successful public demonstration of John Rust’s mechanical cotton picker. The Daily News desired that the picker “should be driven right out of the cotton fields and sunk into the Mississippi River.” The newspaper added its own heavy-handed racialized critiques through typical early-twentieth-century slanted editorializing, asking readers to “imagine, if you can, 500,000 negroes in Mississippi just now lolling around on cabin galleries or loafing on the streets of the cities and towns while machines are picking cotton.”

Whatever the outcomes of cotton mechanization, the transition towards mechanization was rapid: the percentage of harvested U.S. cotton that was machine-picked rose from less than 10% in 1950 to about 50% in 1960 to nearly 100% by 1970. In Delta states the adoption rates are similar. From 1949 to 1969, adoption rates were as follows: in Mississippi, 4% to 94%, in Arkansas, 1% to 96%, in Louisiana, less than 1% to 97% (Figure 3.4).

An important employment arrangement was related to mechanization: the use of “day labor”, workers hired for a day’s work at a time. Delta farms were far more likely to hire labor for short periods than farms beyond the cotton hearth. In spring 1940, the core cotton Delta counties in Mississippi of Bolivar, Coahoma, and Tunica possessed

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54 Jackson Daily News, August 31, 1936.
extremely high percentages of day laborers among hired farm workers: 88%, 82%, and 85%, respectively. Compare these figures to day labor ratios of the same time period for non-cotton Delta counties in Mississippi such as Pearl River, Wayne, and Lincoln, with day-laborer rates of 53%, 35%, and 41%, respectively.\(^{57}\) Similar divergent percentages between cotton core and cotton periphery regions held during the fall cotton harvest of 1939.

In addition, large farms that hired day laborers, instead of monthly or yearly contractual tenant arrangements, were more likely to experiment with new machinery, because any negative byproducts of experimentation were felt less by farms that hired day labor. If the mechanical cotton pickers succeeded, then day-labor-filled farms could

\(^{57}\) 1940 Census of Agriculture - Mississippi. “County Table X.- Cooperative Selling and Purchasing and Farm Expenditures, 1939; Farm Labor for a Specified Week of 1939 and 1940.”
simply fire workers; if the mechanical cotton pickers failed, those same farms could re-hire day laborers with little additional cost or effort. Whatley (1987) noted that stronger labor contracts, particularly the yearly contractual arrangements, historically served as barriers to mechanization.\(^ {58}\) Hopson Plantation in Coahoma County, Mississippi near Clarksdale, was a prime example of this phenomenon. Day labor arrangements were “used almost exclusively” at Hopson by the late 1930s, supplanting the early system of nearly universal tenant farmers. Wages during this time ranged from seventy-five cents to one dollar per day worked.\(^ {59}\) And mechanization did drive away tenant farmers: the post-1944 mechanized Hopson Plantation reduced employment from 130 tenant farmers and their families to around 40 paid workers.\(^ {60}\)

The interaction between mechanization and labor was also related to cotton-picking wages. In 1950, the piece rate for handpicking of cotton (average wages for hand-pickers) averaged between $2.54 and $2.76 per hundredweight across the Mid-South and Deep South. Comparatively, the Far West states averaged a per-hundredweight wage of $3.28. These incomes represented expenses for the landowners, and machine-picked cotton costs fell below hand-picked costs (on a per-hundredweight average) between 1954 and 1957 across the Delta states.\(^ {61}\) By the 1960s, there was no economic reason for planters to even entertain the idea of hand-picked cotton.

The example of Hopson is illustrative of the power of external labor patterns’ effect on internal farm investment. Hopson Plantation was located just three miles from the large city of Clarksdale, Mississippi, a city full of thousands of potential day laborers.

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\(^{58}\) Whatley (1987).
\(^{59}\) Wolcott, Marion Post, photograph, Library of Congress holdings, 1940.
\(^{60}\) Holley (2000), p. 103.
willing to work on Hopson’s cotton fields, and easily shuttled from city to farm and back to city. As a result, experimentation with mechanization was worthwhile risk for Hopson: if mechanization succeeded in increasing profitability, day labor arrangements could immediately end with no legal or financial losses for the plantation; if mechanization was a financial failure, a ready supply of day labor was immediately willing to replace the failed machines working on Hopson’s fields. Because of the relative paucity of larger cities in the Delta, such “safe” experimentation with mechanization was rare.

Unlike the yield increases gained from mechanization, yield increases gained from biological inputs, such as hybrid seeds, were appropriate for farms at any scale: both costs and advantages were financially appropriate for 10-acre farms or 1000-acre farms. As a result, farms around the globe could increase efficiencies and seek greater yields without the high up-front costs associated with mechanization, all while retaining smaller average farm sizes.

Academic historians have long debated the degree of causation of mechanization and outmigration, with the majority view being that the machine-run Delta accelerated local population decline. Alternative views suggest that black migration in particular was affected by the “pull” factors of better employment and social opportunities in the North, or that migration preceded mechanization as a result of New Deal policies in the 1930s and 1940s. Clearly, increased mechanization diminished the need for mass labor, but those emphasizing the cotton-picker-as-sole factor in immediate migration are confronted with a major theoretical paradox: the adoption of mechanized cotton

62 Kilby and Johnston (1972)
63 Aiken (1998); Alston and Ferrie (1999).
64 Peterson and Kislev (1986); Holley (2005); Wright (1987).
equipment was quite gradual, yet rural residential outmigration was rapid. In fact, during the highest period of rural migration away from the Delta in the late 1940s and early 1950s, the success of machine-picked cotton was still very much in doubt, as rates of per-farm adoption in the Delta – and in the South – were quite low.

Holley argues that the increased usage of the mechanical picker was in direct response solution to the problem of a post-World War II labor shortage.\textsuperscript{65} However, he overstates the degree of this late 1940s shortage in the specific Delta cotton market. Additionally, the problem with treating late-1940s labor shortages as motivating pivots for industrial investment are the protracted rates of mechanization, slowly over a period of twenty years – a period that Holley himself calls the “gradual revolution.” A generation-long mechanization process is therefore incompatible with Holley’s thesis, since slow adoption is a woefully inefficient solution for the immediate economic problem of supposed labor shortages in the postwar era.

High rates of rented, tenant-farming land arrangements had clear effects on the economics of Delta mechanization adoption. Without widespread land ownership, individual farmers lacked access to capital accumulation via land sales or land as collateral for loans, for purchase of more land or for purchase of new equipment. The lack of land ownership had rippling effects on the overall liquidity of the Delta economy. Purchase and implementation of expensive mechanical cotton pickers was slow in the Delta. By 1952, about 60\% of all cotton harvested in California was picked by the new machines, while less than 5\% of cotton was machine-picked in Arkansas, demonstrating the long-term effects of the generally illiquid market that Delta farmers inhabited.\textsuperscript{66}

\textsuperscript{65} See Holley (2000) for more detail.
\textsuperscript{66} Holley (2000), p. 119, 131
Over time, as fewer wage-labor costs were dedicated to cotton production, the method of cotton harvesting changed. In the modern era, harvested cotton (before ginning) is stored in protective “modules” which contain 13 to 15 bales. From 2006 to 2008, the average U.S. cotton farms produced a little over 1.7 bales per acre in a year, or nearly 1100 bales of cotton for a square-mile-large 640-acre farm. Arguments of migration or economics aside, by 1970, mechanization’s effects were clear: the automation of hand labor in the fields in the form of the mechanical cotton picker did not merely represent change; it brought change. In the future, farms would need less manual labor for cotton harvests. Moreover, with increased per-acreage yields, this equated to less necessary human input for an increasing rate of sellable output.

The effects of mechanization on labor inputs for cotton production were remarkable. In 1900, cotton required an equivalent labor input of 112 “man-hours per acre” in the United States. From 1920 to 1944, even with important waves of tractorization and herbicide usage, U.S. cotton still required between 96 and 99 “man-hours” for each acre of harvested cotton. But during the 1950s and 1960s, the peak decades for mechanical cotton picker adoption, labor inputs fell to 66 man-hours per acre during the 1950s, to 47 man-hours per acre from 1960-1964, to 30 man-hours per acre from 1965-1969, reaching an all-time low of just 24 man-hours per acre in cotton in 1970. However, these measures describe cotton production at the aggregate level of all agricultural processes: measuring change of harvest production labor costs allows for

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more striking measures: in the early 1930s, cotton required 44 man-hours per acre of cotton during harvest season; by 1970, the measure had fallen to 3 man-hours per acre. Labor inputs per bale summarily declined by over 90% from 1930 to 1970.\(^70\)

Even though the Delta mechanized later than other western cotton sources, the effects of mechanization eventually transformed the landscape of local cotton farming. One change occurred in settlement geographies. On Hopson Plantation near Clarksdale, Mississippi, it was said that “a skilled worker could pick twenty pounds of cotton in an hour. One machine could pick up to 1,000 pounds..... One machine could do the work of fifty people.”\(^71\) With less demand for manual labor, there was less reason for tenant farmers or wage labor to live on or near the cotton farmland. A dispersed pattern of settlement across rural cotton fields gave way to clusters of houses of former cotton laborers, surrounded by square miles of dwelling-less cotton fields. Aiken summarized this phenomenon succinctly: “adoption of mechanical cotton pickers resulted in elimination of additional tenants and demolition of more dwellings.”\(^72\)

Other structural changes came from mechanization: the ginning process has changed, as by 1970 most cotton farming in the South moved toward “cooperative” gins, purchased by groups of farmers, usually at a total cost of over $500,000. And the scale of modern cotton agriculture has changed the post-harvest phase of production: enormous “modular bales” of cotton line the edge of a field and road, waiting for large trucks to process the rectangular bales to gins for finished processing.\(^73\)

\(^73\) Hart (2003), pp. 246-247.
The sweeping changes that occurred across the Mississippi Delta in the mid-twentieth century remade the entirety of the landscape of cotton production. Perhaps the economic tension and forthcoming life changes are best represented in the reminiscences of a man named Gene, who grew up on a Delta cotton plantation in Mississippi. Remembering the first time he saw a mechanical cotton picker in 1952, he noted that “we all had this vague, eerie feeling that the world had just changed somehow – we just didn't know precisely how, or how much.”

3.3 Land Parcels, Tenant Farming, and Cotton Yields

The transformation of the Delta South from 1930 to 1970 is highlighted by a general pattern within cotton agricultural systems: fewer farms, fewer farmers, and a correspondingly greater average acreage per farm. By 1970, the transition from small family farm to large-scale commercial farm was nearly complete (Although several farms, each worked by a tenant farmers, were usually owned by a single landowner, the spatial unit of the “farm” is a more relevant measure of cotton production, since labor of the tenant farmer instead of the labor of the landowner ultimately played a role in determining annual yields.)

The Mississippi Delta was not the only major cotton-producing area in the South during the early twentieth century. However, it was the region with the highest total and per capita production of cotton, with Delta state measures of bales-per-acre far more than Georgia or South Carolina. (A modern “bale” of cotton weighs about 480 pounds of net

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Study of the cotton Delta at more local scales is especially important given the widespread existence of cotton plantations ("industrial-type farms") in this region in the early twentieth-century. In addition, Delta cotton plantations exerted considerable social and political pressures throughout their respective localities and states, elevating associated Delta social geographies.

A “plantation” can have an amorphous meaning in economic geography, describing a variety of endeavors. Temporally, a “plantation” can refer to a variety of spatial antecedents, such as the vast, sprawling latifundia dotting the Mediterranean coasts during the height of the Roman Empire. This dissertation refers to a “plantation” as a large-scale farming complex devoted to (usually one) exportable cash crop. The quantitative spatio-economic definition of “plantation” is used here, as opposed to particular present-day meanings ascribed to the term, which are often associated with particular cultural representations or memories of American slavery.

This definition of plantation – a large-scale, near-industrial-like farm – was common in the nineteenth- and twentieth-century South. The U.S. Census Bureau, for example, issued a report “Plantation Farming in the United States” in 1916, and classified the existence of 39,073 plantations in the South with an average acreage of 724.2 acres per plantation in 1910. Delta state plantation average acreages in 1910 were 615.7 acres.


Such as failed the 2010 statewide referendum in Rhode Island to remove “and Providence Plantations” from the legal name of the “State of Rhode Island” due to the historical association of slavery with the term “plantation.” That slave labor existed en masse in Colonial-era Rhode Island made the association of slavery, a New England state, and “plantation” problematic. See "Rhode Island Weighs Using Shorter Official Name." New York Times, 30 Jun 2009. In addition, accurate spatial recognition of farm size is essential. McKenzie (1994) described his cross-section statistical study of mid-nineteenth-century Tennessee, noting caution of comparisons between plantations and small farms, specifically, the “futility of blanket comparisons of plantation and nonplantation districts.” McKenzie, p. 190.
in Arkansas, 663.5 acres in Mississippi, and 904.0 acres on the average Louisiana plantation. The same report noted that “there is little doubt that the plantation system is both absolutely and relatively more important in Mississippi than in any other state.”  

The plantation landscape, one dominated by hand-picked cotton with mass labor, declined in the Delta (and elsewhere) by the late twentieth century. Ironically, this decline and fall had been predicted repeatedly since the end of the Civil War, yet plantation life continued. For example, the accepted historiography at the beginning of the twentieth century quantitatively declared that the end of the plantation era had already come to the American South, and was replaced by small family farms.

What follows are region-wide analyses of twentieth-century Delta farmland and crops. These analyses support my argument that the cotton Delta South possessed severe comparative disadvantages of from farmer oversaturation on smaller parcels of land among a more efficient, westward looking national cotton production belt. Similarly, a changing Delta from 1930 to 1970 exhibited several signs of stark agricultural trends, including the rapid decline in the number of farmers and the rapid increase in the average

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78 “Plantation Farming in the United States”, Department of Commerce, 1916, p. 21-22. The higher average plantation size in Louisiana can be attributed to the inclusion of Louisiana’s sugar plantations. The same report warned that there is no distinction “between plantations and other farms, the term 'plantation' being applied simply to large farms usually comprising several hundred or even thousands of acres”, p. 7.


80 Aiken (1998) noted that historians and journalists of this period declared the supposed end of the plantation as completing a process of destruction that had occurred after the end of the Civil War. This vision of plantation life’s end in 1900 or 1905 likely resulted from a misinterpretation of agricultural census statistics that showed average farm size decreasing as the number of farms increased, implying the decline of large plantations. In reality, these statistics equated legally landless sharecroppers with small farmers – erroneously equating “farm” with “landholding.” Correcting for this error painted a clearer picture of a still-plantation South in the first three decades of the twentieth century. Aiken (1998), pp. 7-8.

81 The actual total cropland acreage in the Delta increased from 1949 to the late 1990s, which causes the Delta’s “total cropland” increases to stand alone from the rest of the South. However, increases in non-forested cropland acreage are not necessarily signals of increasing cotton production, cotton laborers, or cotton farms: these increases were explained by the draining of the last of the “bottomland hardwood forests” in the Delta, completing a process that began in the nineteenth century, most pronounced in Louisiana and Arkansas. See Hart (2001), p. 532, 535. In some areas of the wider South, other factors have led to modest acreage increases, such as the permanent eradication of boll weevil infestations.
size of cotton farms. These trends signified the end of small-scale, ex-plantation era farming, as mechanized commercial agriculture replaced the historic labor-intensive sharecropper farming belt of the cotton Delta. The system of cotton farming in 1930, with huge plantations divided among dozens of associated small tenant farmer or small landed farmer plots of land, gave way to more concentrated holdings, which ushered in the era of large-scale commercial agriculture that exists today.

Throughout this study, the Delta has been defined as a wide, multi-state region, but certain groupings of counties will be addressed throughout this dissertation. Furthermore, while extensive research of personal and business records has been undertaken, it must be noted that “industry-wide” census-like tabulation of various cotton measures are largely unavailable, consistent with the general lack of widespread availability of historical plantation records and papers.

Arguments that mid-century Delta transformations were simply part of larger waves of the decline of agricultural jobs in the United States fall flat due to land parcel sizes and labor pools characteristic to cotton farming in the Mississippi Delta. While it is

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82 The decline of the number of farmers was directly related to massive outmigration of cotton workers, and is discussed more fully in the migration-centric Chapter 5. Statistical definitions by the United States Census of Agriculture treat “farmland” as all types of land – harvested cropland, non-harvested cropland, woodland forests, farm woodland – that serves within the operational realm of a “farm operator.” A farm operator defined as a person producing a minimum value of farm products per year. A minimum “farm operator” value of $1,000 was set in 1974. At times, such aggregation can lead to errors when conflating “farmland” with “cropland” (or harvested cropland), so great care has been taken to differentiate between the two terms as applicable. See Hart (2001), p. 530 for more explanation. Hart further notes that such differing meanings between “farmland” and “cropland” explain fears over lost farmland in the late twentieth-century American public consciousness, as over 65% of the so-called “lost” farmland was actually disappearing woodland, often sold to lumber companies. The woodland spaces within farms were typically not essential to farm production in the first place. In some situations, “cropland harvested”, which is equivalent to land in farms minus farm woodland, other farmland, and other cropland is a more accurate basis for comparison. Hart (2001), p. 530-533. Also see Hart (1968).

83 Documentary evidence in the form of primary sources, particularly from plantations and locations dating to the nineteenth century often faces the problem of a general lack of planters’ personal papers. However, surviving personal papers are useful. Woodman (1968) mentions that these papers “proved to be rich and enlightening…” containing “letters and circulars from factors…. copies of letters sent to factors… [lists of] the money they paid for plantation supplies… bills of exchange…” Woodman, p. xi.
true that the ratio of farm workers to the total labor force declined in all the United States throughout the late nineteenth and entire twentieth century, what makes this Delta transformation different is its 1930 base of large labor forces per farm: tenancy rates, number of workers per farm, and the dearth of technological or capital implements were greater in the Delta than the Midwest.

Thus, what is geographically different about the Delta was its distinguishing small parcel size for individual cotton farms. In 1930, the Southern states exhibited much smaller parcel sizes than the rest of the country, and in particular, the Delta states within the larger South possessed even smaller average farm sizes in 1930. 84 A clearer picture of differentiation within "the Delta" emerges under examination of farm parcel size in 1930 at the county scale: farms located in the historical Delta cotton-producing core were much smaller, on average, than their non-cotton core counterparts (Figure 3.5). 85

These patterns of acreage holdings are foreseeable with an understanding of farm tenancy: with a greater number of farmers (be they owners or tenants) among the cotton farms, overall farm sizes were small. Not only were large numbers of persons employed as farm workers in the cotton belt, but large numbers were "farmers". This relationship, of a comparatively "dense" scale of agriculture workers, with many farmers working small farms, is a hallmark of ex-plantation agriculture around the globe. 86

Structural systems in the Delta endemic to similarly rural ex-plantation areas, including the small number of powerful landowning elite, contributed to an economy that

84 Alabama (with its cotton-producing “Black Belt”) is similar to the Delta’s unusually small farm sizes.
85 Holley (2000) summarizes this view, writing that the cotton South’s “effective farm size” was the driver of persistent poverty in the region. Holley (2000), p. 11.
86 For example, Senegal’s average farm size was 10.6 acres per farm in 1998-1999, and French Guiana’s average farm size was 11.4 acres in 1989. See Eastwood (2004). Nicaragua, independent from European rule since the 1820s, yet still possessing some characteristics of the imperial world, has an average farm size of no more than 49 acres as of 2011. See Berdegue (2011).
Figure 3.5: Average Farm Size (in acres) among Delta counties, 1930. A much clearer picture of "the Delta" emerges under examination of land parcel (farm) size in 1930, highlighted in light blue. Only the heavy sugar production region of South Louisiana exhibits average farm size over 146 acres.
generally prevented widespread capital formation and impeded the growth of a large middle class, itself a harbinger of modern economies. Holley wrote that “what kept the Cotton South backward... was not cotton or even tenancy itself but the region’s effective farm size. The average sharecropper operated only fifteen acres, about all that one man and a mule could handle. But fifteen acres was far too little land to justify equipment purchases.”

The average farm size in Mississippi in 1930 was 55.4 acres per farm as a statewide measure. However, the average acreage was much lower in cotton Delta counties (such as Bolivar, 25.7 acres per farm; Coahoma, 27.4 acres per farm; Humphreys, 23.3 acres per farm; or Sunflower, 26.1 acres per farm) than non-cotton, non-Delta counties in Mississippi (such as Perry, 103.9 acres per farm; or Benton, 84.2 acres per farm). Delta farms were exceptionally small: as a comparison, the ten counties with the smallest average farm size in Mississippi in 1930 were all in a single contiguous cluster in the Yazoo Delta region in northwest Mississippi.

The smaller size in the early twentieth century coincided with a decline in large plantations: Aiken puts the total plantation count for the entire South (using the largest “plantation” definition) at around 2,500 in 1910 and just 382 in 1940. Specific measures and comparisons would differ when cataloging the Delta states (or Delta cotton core) only; however, the overall trend of smaller parcels (and thus smaller farms) was evident.

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88 See 1930 Census of Agriculture for Mississippi. Larger farms even existed in the “Black Belt” of Mississippi and Alabama, such as Noxubee County, Mississippi (53.1 acres per farm). Similar acreage relationships that display smaller sizes of cotton farms in the Delta compared to non-cotton or non-Delta farms exist across other Delta states.
89 Mississippi Counties with smallest average farm size in 1930, from smallest to largest, were: Humphreys, Bolivar, Sunflower, Coahoma, Leflore, Quitman, Tunica, Sharkey, Washington, and Tallahatchie.
in the Delta in 1930. Additional regions with lower average farm size outside of the cotton Delta include the Red River basin in northwest Louisiana. Potential in-Delta anomalies of large farm sizes within the Delta include Prairie, Arkansas, and Desha counties in Arkansas, which possessed regionally-inconsistent average farm sizes due to widespread bottomland areas in and along the Arkansas, White, and Cache Rivers.

The Delta’s decline and fall as a leading national (and global) cotton-producing belt occurred simultaneously with a decline in some national-level measures of cotton “farming”. The nationwide number of cotton farms (1,987,000) and the acreage devoted to cotton farming (43.2 million) reached a maximum in 1929, with total bales (14.6 million) reaching a high that would not be eclipsed until 1949.

However, from the early 1930s onward, both the number of total farms producing cotton and the number acres devoted to farming cotton declined sharply (Figure 3.6). Yet, cotton yields increased: the average bale yield per acre was between 0.3 and 0.4 bales from 1899-1934, but rose sharply to measures between 0.5 bales and 0.7 bales from 1939-1954, and rose further to averages closer to 0.9 bales per acre from 1959-1974. The

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91 South Louisiana farms include acreage of unusable river land in true coastal parishes. Similar patterns of large, unfarmable land skewing towards a larger average farm size appear in the Ozark or Ouachita regions.
92 The bottomlands were unpopulated, but were owned by individual farmers in 1930 and thus counted in calculations, pushing those counties’ average farm size higher than the average size of actual cotton farms.
93 1974 Census of Agriculture, “Table 4: Cotton Harvested: 1899-1974”
result was a cotton hearth of more efficient farms, fewer in number but larger in average size.  

The crisis and eventual breakdown of existing order that the rural Delta experienced after the 1930s was precipitated by volatility in the cotton markets. Such “volatility” may seem counterintuitive in hindsight, as cotton production was at an all-time high during this era: peak years of total U.S. cotton yield occurred in 1926 and 1937, and were not eclipsed until 1994. However, with reliance on a single cash crop, even mild fluctuations in cotton prices had serious effects on the region’s farmers and farm workers. An examination of historical cotton prices exhibits this widespread volatility (Figure 3.7). Note the sharp swings in price per pound from the beginning of World War I in 1914 (the European theater) to the worldwide nadir of the Great Depression in 1931-1932.

The coming price floor of the 1930s cotton market had rippling effects due to the recent crises of cotton prices in the 1920s: cotton prices in the decade bottomed in 1926, and in 1927, much of Mississippi and Arkansas were underwater for months after the Great Mississippi River flood. The region could not cope with flood devastation combined with falling prices of cotton over the next few years, as a nearly 50% drop in market price of cotton occurred from 1929 to 1930, from 17.4 cents per pound to 9.2 cents per pound.

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94 The average bale yield per acre was between 0.3 and 0.4 bales from 1899-1934, but rose sharply to measures between 0.5 bales and 0.7 bales from 1939-1954, and rose further to averages closer to 0.9 bales per acre from 1959-1974.  
96 Price data unadjusted for inflation. Further measures of price, including the Memphis Territory Mill Price, or “MT Mill Price” are useful additives, but a single value for a national annual measure is much more helpful in analysis of historical comparatives, and resolves the differences emanating from the idiosyncrasies of local markets and prices.  
Figure 3.6: The total number of cotton farms in the United States, 1899-1974. The number of cotton farms peaks around 1930, entering a period of sharp decline until a bottoming out in the 1970s.

Figure 3.7: Cotton Price Volatility, 1900-1970. Data from USDA historical track records, data unadjusted for inflation. Note the floor of cotton prices in the early 1930s.
Cotton price instability was a serious problem for Delta farmers, not only the direct economic effects, but also for the related social tension and breakdown that came with such volatility.\textsuperscript{98} Wild price swings to historic lows had effects that especially rippled throughout communities whose populace was nearly universally employed in some aspect of cotton farming, but the bottoming out of cotton prices in the early 1930s represented a veritable economic calamity to these communities and workers. That prices would rise and fall was not noteworthy; that prices fell below 10 cents per pound was absolutely of concern. This is not to suggest that cotton producers of the era were purposely choosing unwisely by forgoing other crops in pursuit of the inherently unstable cotton market; greater potential yields were on the side of cotton farming. Bachuma compared relative commodity prices with physical yield and acreage for a period around 1950, and computed the “revenue per acre of land capable of producing one bale of cotton per acre”. Soybean production yielded $50 per acre, corn production yielded $54 per acre, but cotton production yielded $193 per acre ($165 from lint and $28 from cottonseed).\textsuperscript{99}

Added pressures on the Delta cotton market included the growth of cotton production outside of the United States, discussed at length in Chapter 2. Cotton production increased during the 1910s and 1920s in Egypt and India (especially in comparison to U.S. production increases), where increasingly cheaper production costs

\textsuperscript{98} The New York Times (1893) reported on the social breakdown related to cotton price swings, in that the White Caps, a local variant of a larger nationwide wave of small vigilante groups, “pasted notices on almost every gin in [Southwest Arkansas], warning farmers not to gin any more cotton until the price advances to 30 cents per pound.” 30 Oct 1893. It was noted that such threats of violence, that would include burning the unginned cotton crop still on-site in the gin, were persuasive in preventing continued ginning in the area. The financial importance of good cotton harvests was too important to risk.

\textsuperscript{99} Bachmura (1957), p. 942-943. Higher production costs of cotton (using both hand-picked and machine-picked cotton) relative to soybean or corn, but total net operating revenues per acre still made cotton three times the more profitable crop on average, even accounting for differences of cotton bale yields per acre.
and transportation costs were causing the center of the global cotton market to shift across the Atlantic to the Old World.\textsuperscript{100} By 1960, the average yield per acre of cotton was higher in Egypt than the United States.\textsuperscript{101}

An agrarian Delta society with foundations built on widespread manual labor of cotton production could not sustain multiple years of 1930s-era prices. As cotton prices fell during the worst years of the Great Depression, increasing percentages of these small farm owners defaulted on payments or mortgages and lost their land. This crisis of falling cotton prices reverberated to state governments: lower cotton prices resulted in lower farm incomes resulting in lower income tax revenues for state governments. Additionally, higher farm foreclosures (resulting from farmers’ inability to make mortgage payments due to lower incomes) resulted in lower property taxes for local governments, who could then not pay for functions and services in their own communities, passing on that responsibility to already cash-strapped state governments.

The result of the cotton price floors of the early 1930s was the fiscal default of multiple Southern state governments. Considering the rippling effects of governmental default and price volatility, why would price incongruity in the early twentieth-century automatically signal the beginning of\textit{permanent} regional changes? A few years’ cotton crops might face troubles, and tax bases might be low for a time, but the agrarian Delta, with its very high cotton yields, did not survive in the short-term because of the systemic disadvantages of land ownership. In the Mississippi Delta of 1930, too few farmers owned their own land to keep regional levels of cotton production competitive with wider

\textsuperscript{100} Cotton production in India existed in the nineteenth century, but the quality of Indian cotton at the time was judged as inferior to cotton produced in the U.S. South. Also see Youngblood (1929), p. 537.
\textsuperscript{101} Abbott noted yield-per-acre in the 1959/1960 cotton season as 462 pounds in the United States, 552 pounds in Egypt, 426 pounds in Mexico, 419 pounds in Peru, and 656 pounds in the Soviet Union. Abbott (1964), p. 168.
national and global markets in the coming decades.

Tenancy, or the act of renting or leasing farmland owned by another individual, was not a new economic arrangement within the historical Delta. Global agricultural histories point to workers, as either day laborers or long-term tenants, producing on another owner’s fields since the dawn of the first agricultural revolution, to the far-flung latifundia of the Roman Empire, to the feudal system of socage within medieval England. Immense changes within non-ownership agrarianism occurred during the era of global trade, colonialism, or mercantilism, beginning in the sixteenth century. Increased trade networks allowed cash crops to be sold on a world market. Lucrative agribusiness ventures, including the production or refining of tobacco or sugar cane, for example, were often grown on enormous plantations that required several hundreds of laborers (usually slaves, before the nineteenth century) per farm.102 Colonial geographies of agriculture in the Western Hemisphere were most evident in Brazil and the Caribbean Islands, but also were found in the American South, before and after the Civil War.

Because land can be sold, collateralized (for loan acquisition), improved, or simply maintained, there is an enormous degree of economic security associated with a farmer owning the land he or she works. Under tenant farming, increasing debts, potential evictions, and the impossibility of realized capital gains (as tenant farmers could

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102 Indentured servitude of a few persons per farm was common among the temperate New World, particularly during the seventeenth and eighteenth centuries; see the Tidewater regions of Virginia and Maryland for examples. However, the more tropical Caribbean farms developed into large-scale plantation farming with large numbers of laborers. The Caribbean-style large-scale plantation is far more relevant for this study due to large-scale farms’ sheer financial importance compared to the one- or two-laborer small tobacco farms in colonial Maryland. For example, in 1680, the entire colony of Virginia levied a two-shillings tax on each hogshead of tobacco exported. The entire year’s tax raised about 3,000 pounds for the colonial Virginia government. By contrast, in 1647, to purchase a single half share in a Barbados sugar plantation 500 acres in area cost about 7,000 pounds. The financial output – and importance – of large-scale plantations dwarfed the small family farms with a few servants. See Galloway (1989) p. 80, Middleton (1953), p.112.
not sell the land they worked) created numerous economic problems from the tenant farming system, particularly within cotton production. The associated economic effects of tenant farming are evident in a variety of statistics. For example, in 1940 in Mississippi the average age of an automobile belonging to farmers who owned their land was six years, or a 1934 model. The same average measure for tenant farmers was eight years old, equal to a 1932 model automobile.

In various agricultural histories, the degrees of farm ownership, from hired laborer to tenant farmer to full farm owner, are described as “rungs” of an “agricultural ladder.” Additionally, similar degrees or rungs have been identified on a “tenancy ladder.” Sharecropping, the lowest rung, saw tenants provided with equipment, housing, and seed by the landowner. Sharecroppers worked the land, splitting the proceeds of the crop with the landowner, minus the costs of owner-supplied “purchases” given to the sharecropper throughout the year. (These deductions often led to a continual increase of accumulating sharecropper debt in times of low cotton prices.) Above sharecropping, share tenants supplied their own equipment, but similarly paid the landowner a share of the crop proceeds at year’s end. Cash tenants, at the top of the tenant ladder, were land renters, paying a fixed amount to the landowner for a year’s land usage, without paying any crop shares or receiving any seed or equipment from the landowner. This system had exceptions, but the general characteristics of these tenant-farming categories were valid.

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103 Vance (1929) and others have claimed that tenant farming forced cotton upon Southern farmers, claiming that “financial interests” were the cause of the South’s cotton dependency. Because only cotton-related farm equipment, fertilizers, and seed were given to tenant farmers as an advance, Gisolfi (2006) argued that “farmers did not choose to grow cotton year after year; rather their creditors required them to do so.” However immobilizing tenant farming obligations were, these arguments fall flat when statistics of owner-operated farms are considered, who also overwhelmingly chose to produce cotton. Gisolfi (2006), p. 170.

104 1940 Census of Agriculture-Mississippi. “State Table 11: Specified Farm Machinery and Facilities”

Tenant farming was extremely inefficient from the perspective of labor: many sharecroppers received food and clothing, which as Holley notes, “amounted to payment in advance of labor.” Additionally, sharecroppers were not paid at an hourly wage, and because of the seasonal aspect of cotton production, these and other combined inefficiencies coalesced to create a system of economic waste.¹⁰⁶

Tenancy also enabled the commercial success of privately-owned cotton gins established in towns rather than on plantations. Before tenancy, all of harvested cotton could simply be collected, processed, and ginned at the plantation. But with the division of land into many farm parcels, each farmed by tenants, individual tenant farmers did not transport each portion of harvested lint to the plantation – that would be a time-consuming journey on a farm with no labor other than the tenant farmer’s family. In addition, in a plantation world with fragmented ownership, the central plantation site (equipped with a local gin) might be twenty miles away or more. Large commercial cotton gins in nearby Delta towns filled this niche of demand. The U.S. Census of Agriculture noted in 1900 that, because of the associated effects of tenancy, harvest, and on-site ginning, “public ginneries became a necessity.”¹⁰⁷

The Delta’s structural disadvantages associated with “renting” farmland is exhibited through historical tenant farming data. In 1930, the state of Mississippi had the highest rate of tenant farmer farm operation in the country, at 72% of all farms, followed by Georgia, Louisiana, Alabama, South Carolina, and Arkansas, with tenancy rates between 68% and 63%, respectively. Compare these rates to the average tenancy rates in the Western States (20.9%) or Northern States (30.0%). Clear geographical patterns of

¹⁰⁷ 1900 United States Census of Agriculture, 1900, p. 410.
tenant farming are especially seen in comparison with the most productive agrarian states of the Midwest: Missouri (35% tenancy), Kansas (42%), Iowa (46%), Minnesota (31%), and Nebraska (47%) all possessed a far greater share of owner-operated farms. These tenant farming measures are similar for counties within states. For example, in 1930, in Sunflower County, Mississippi, 96% of farms were farmed by non-owner tenants (including sharecroppers), compared to a 48% tenancy rate in the representative counties of Pottawattamie County, Iowa (the largest corn producer in that state), and a 41% tenancy rate in Imperial County, California (the largest lettuce producer in that state).

However, farm tenancy should not be argued as a feature of Southern agriculture, but instead it as a hallmark of Southern cotton agriculture. The non-Delta states where cotton spread or was agriculturally important exhibited the highest degrees of tenancy, including Oklahoma and Texas (61% tenancy rates). Furthermore, similar “Southern” states that were not involved in even moderate cotton production had very low tenancy rates, including Kentucky (36% tenancy), Virginia (28%), North Carolina (49%), and Tennessee (46%), exhibiting percentages far lower than most Midwestern states.\(^\text{108}\)

Patterns of tenant farming are most apparent at the spatial level of the county. In 1930, a wide cotton core on either side of the Mississippi extended from just north of New Orleans to Cairo, Illinois, defined by a high percentage of tenant farming. In all the states of the greater Delta region, the cotton-producing counties closest to the Mississippi exhibited this high proportion of tenant farmers. Note the continuation of high tenancy rates in Imperial County, California (the largest lettuce producer in that state).

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\(^\text{108}\) Tennessee, identified as a “Delta” state in this research, appears out of place with a lower tenancy rate. Such state-level comparisons are distorted because of in-state regional differences, as non-cotton Middle and East Tennessee’s low tenancy rates drive down the overall state average. By comparison, the cotton-producing counties within Tennessee, particularly those that border the Mississippi River, exhibited similarly “Delta” rates of tenancy in 1930, including Tipton (75% tenancy rate), Shelby (77%), Lauderdale (77%), Dyer (74%), and Lake (92%).
north of Arkansas and Tennessee into Missouri and Kentucky, respectively. The Missouri “Bootheel” region, and extreme western Kentucky were important cotton producers and should not be excluded from this study because of formalized state boundaries upon arbitrary latitudes. However, these states’ share and longevity in cotton production pales in comparison to Mississippi, Louisiana, Arkansas, and Tennessee, so cursory investigations of these regions are sufficient.

The high 1930 tenancy rates of the “Black Belt” in eastern Mississippi from western Alabama, and of the Red River region in northwest Louisiana are smaller the cotton Delta, and their corresponding influences and impacts on Delta states’ social and political decisions were less than their Mississippi River counterparts. For example, LeRoy Percy, a member of the Delta planter elite, commanded an inordinate amount of political power in Mississippi state politics compared to the voting population percentage that lived in the Delta. Percy, a cotton planter from Greenville, Mississippi, began as a lawyer, slowly acquired land parcels (sometimes as payment for legal fees), and eventually accumulated over 20,000 acres of land, with a main plantation at Trail Lake. In 1910, now a powerful, wealthy Delta businessman, Percy was appointed by the Mississippi State Legislature as a United States Senator from Mississippi. ¹⁰⁹

A Delta cotton “core” emerges through land ownership and tenancy analyses, building on previous definitions of “Delta” as cotton producers (Figure 3.8). For nearly the entire length of the Mississippi River from Baton Rouge to Kentucky, tenant farmers worked 90% or more of all area farms, with radiating bands of non-riverine counties of over 80% tenancy.

¹⁰⁹ The 17th Amendment that provided for the direct election of Senators was not ratified until 1913.
Figure 3.8: The center of a Delta cotton "core". Counties with tenant farming rates over 80\% (light purple) and over 90\% (dark purple) in 1930.
Tenancy was a *twentieth-century* phenomenon; the image of the end of Reconstruction immediately ushering in an era of indebted tenant farmers is incorrect. For example, in Arkansas, the state tenancy rate in 1880 and 1890 was about 32%, rising to between 50% and 51% in 1910 and 1920, sharply rising to 63% by 1930. Delta counties with tenancy rates over 50% in the late nineteenth century were the exception: Holley analyzed 22 Delta counties in Arkansas, finding that just nine counties had greater than 50% tenancy in 1880, while all 22 counties had greater than 50% tenancy by 1930.\textsuperscript{110} Increases of legally landless farming in the early twentieth century presaged the radical changes of the 1930s and beyond. Sharecropping certainly developed as a complex but extralegal set of economic agreements in the years immediately after the Civil War (often as a result of white and black farmers losing their land to more powerful corporate or agricultural interests), but tenant farming would not be known as the dominant spatial arrangement of the “typical” Southern farm until after 1900.\textsuperscript{111}

Eventually, breakdown of the tenant farming system of time did occur, and the Great Depression was the impetus for widespread changes in tenant farmer and planter relationships: tenancy peaked in the cotton South around 1935, according to U.S. Census records.\textsuperscript{112} As cycles of debt accumulated by tenant farmers became unmanageable, some landowners could not afford to pay their own mortgages or debts, and banks foreclosed on the land, dispossessing landowners but displacing tenant farmers. While in 1930, over 90% of farms in the cotton “core” were effectively “rented,” by 1950 the

\textsuperscript{110} In Arkansas, only Crittenden County, just across the Mississippi River from Memphis, possessed a tenancy rate higher than 75% before 1900. See Holley, p. 258 in Whayne, ed. (1996).

\textsuperscript{111} Pete Daniel best describes the late-nineteenth century phase of sharecropping-by-necessity as farmers lost their land, noting “As King Cotton reorganized his realm, merchants, landlords, banks, loan companies, and life insurance companies controlled increasing expanses of southern cotton land”, Daniel (1986), p. 4.

\textsuperscript{112} Tenant farmers produced 57% of the total cotton yields by 1900. And racial differences existed over time. In 1900, white cotton farmers had a tenancy rate of 41.5%, while black cotton farmers had a tenancy rate of 80.7%. 1900 United States Census of Agriculture, 1900, p. 408-409, 418.
percentage had dropped throughout the region (Figure 3.9). Only the Yazoo Delta in northwest Mississippi and small parts of northeast Arkansas retained the exceptionally high levels of tenancy that were nearly universal in 1930. These regions also serve as lagging indicators, as by 1970 even these cotton empire strongholds had fallen sharply to much lower levels of tenancy.\textsuperscript{113}

The post-1930 shift away from tenant farming was mostly driven by tenant farmers leaving (or being “removed”) from the land, as landowners sold parcels for gain, or as landowners successfully experimented with mechanization. In other situations, tenant farmers left the Delta entirely to look for other work, and in the midst of mass movements of peoples out of state, landlords were unable to collect on past tenant

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure39.png}
\caption{The demise of the cotton core: tenancy rates in Delta state counties in 1930 and 1950, compared, using the same data class breaks. Only the heart of the Yazoo Delta in northwestern Mississippi retained its exceptionally high tenancy rates by 1950 (over 73.1%).}
\end{figure}

\textsuperscript{113} In Mississippi, the statewide tenancy rates fell from 32.3\% to 9.1\% from 1959 to 1969. Even the core cotton counties in Mississippi’s Yazoo Delta exhibited extremely low rates of tenancy by 1969, including Tunica County (29.0 percent), Sunflower County (25.6 percent), Coahoma County (28.4 percent), and Bolivar County (20.6 percent).
farming debts. These processes were part of broader Delta-wide trends: immediately after World War II, a decade-long period of outmigration occurred from the Delta, when about 2.6 million persons simply left the Delta states, with the vast majority of migrants originating from tenant-farming heavy cotton counties.

The decline of farm “renting” and the rise of farm “owning” represented a watershed moment for the Delta. Labor and power relationships were affected, pitting a large class of tenant farmers against a small planter ruling class. However, individual small family farms or yeoman cultivation were not all of the replacements for the old system of sharecropping. Instead, the statistics of tenant decline mirrored a rise in average acreage per farm. The tenant farmers of the 1930s were not converted to owner-operator status by the 1970s; the 1930s small-parcel agrarians simply stopped farming altogether. What remained in the Delta region by the 1970s and beyond was a landscape filled with several-hundred-acre farms.

The financial disincentives of tenancy were numerous: the lack of collateral for mechanized equipment loans, capital accumulation, and small economies of scale; these specific financial market detriments will be discussed at length in the next chapter. Nevertheless, the widespread pattern of cotton farmers that worked but ultimately did not legally control their own land meant that individual farming decisions were made among a limited set of choices: the lack of land as collateral removed the possibility of a tenant farmer receiving a loan to buy a mechanical cotton picker, for instance. But collectively, the tenant farming arrangements that dominated the cotton production landscape of 1930

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114 The effects of tenancy on race, labor, and class are discussed at length in Chapter 6.
115 By the late 1980s, Delta counties such as Coahoma County, Mississippi and Issaquena County, Mississippi both exhibited average farm sizes of well over one square mile (807.4 acres and 824.5 acres, respectively.)
were a region-wide drag on continued Delta regional cotton supremacy, and those regions in Texas, Arizona, and California not burdened by widespread tenancy were poised to develop – and increase – their shares of production in the years after 1930.

### 3.4 Case Studies of Land Parcel Change in the Delta

Cotton farmland parcelization in the Delta South contributed to extremely disadvantageous economic geographies when compared to cotton farm landscapes across the nation and globe. After 1930 in the Delta, over-farmed small cotton farms that were worked by tenant farmers with lagging rates of mechanization contributed to a movement of cotton production westward and overseas. These wider shifts of cotton ultimately transformed the cotton Delta from a region of mass labor and hand-picked cotton into a depopulated and mechanized landscape by 1970, at which point the remaining former cotton workers lived in a region of widespread economic stagnation and decline other than the profitable few very large farms.

Global and national migrations of “core” cotton production were detailed in Chapter 2, and comparative disadvantages of Delta cotton production from 1930 to 1970 have been addressed so far in this chapter. Comparative disadvantages and wider regional transitions are important to investigate at smaller scales, including the scalar levels of individual farms. Analysis of individual land parcel data suggest evidence as to how farmers fared in a financial environment that increasingly favored large agribusiness over small tenant farming plots.¹¹⁶ What follows are brief examinations of local-scale

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¹¹⁶ Shifts in rural land boundaries in recent GIS literature include Heasley (2003) and Cunfer (2005).
change of four cotton farm regions in the wider Delta (Figure 3.10). The four case studies are important representatives of the wider Delta, representing dense and sparse agrarian landscapes both near and far from larger urban places. Such distinctions are important as the presence or absence of urban connections played a role in supplying labor for cotton farms. Several further examples of local-scale change in the Delta will be introduced in the context of other transformative themes in later chapters.\textsuperscript{117}

[Figure 3.10: Locations of the four major case study areas discussed in this section.]

Investigations of local-scale changing land use and settlement in southern Mississippi County in northeast Arkansas centered on the twentieth-century changes on land where cotton farming existed since the antebellum era. The large estate of Dr. John Nelson encompassed around 175 acres of prime agricultural land in 1840s.\textsuperscript{118} In this era,  

\textsuperscript{117} Including Frogmore Plantation in Louisiana, Sunflower Plantation in Mississippi, Cotton Plant, Arkansas, the Friar’s Point, Mississippi, Monroe, Louisiana, and the historic gin landscape of rural Lake County, Tennessee.

\textsuperscript{118} Plat maps for this likely cotton farm marked the location of four separate “Negro Houses”, which are obvious hallmarks of slavery. Acreage estimated from undated Mississippi County Plat Book, which
the bottomlands of Arkansas and Mississippi had yet to be cleared, so cotton farms were relatively small-scale with respect to labor, and land division was scattered and sparse.\textsuperscript{119} But this antebellum landscape appears to not have much influence on local cotton farm patterns by 1930; such tenant farming settlement and division is similar to cotton landscape throughout the Delta. The rural cotton world of south Mississippi County was a scattered agrarian landscape, with dispersed tenant farmers, and a 1930 population density of 77.2 persons per square mile.

By the 1960s, Nelson's parcel existed as a dense agrarian landscape, with linear formations of settlement: while the 1930s settlement patterns saw tenant homes spread across large plots of land, by the 1960s, the dense, compact along-a-highway cluster of settlement had become dominant. Tenant farmers were in the process of clustering along major routes instead of widespread settlement among the farms. The hallmarks of wider structural changes in the economic Delta were apparent.\textsuperscript{120} A related transition was the widespread \textit{depopulation} of the township, as local populations fell during this period. Settlement did not simply ‘move’ as machines replaced tenant farmers, settlement patterns disappeared as the dense population layer simply thinned away.\textsuperscript{121}

Land ownership change is even more significant: using plat maps from the early 1960s, a comparison can be made between those 1960s ownership patterns and post-

\textsuperscript{119} In 1850, the average Arkansas “farm” had 2.7 slaves; in Mississippi, 9.1 slaves; in Louisiana, 18.3 slaves. In 1860, the average Arkansas “farm” had 3.3 slaves, in Mississippi, 11.8 slaves, in Louisiana, 19.2 slaves.

\textsuperscript{120} Federal infrastructure improvements are seen by the under-construction Interstate Highway 55.

\textsuperscript{121} Scott Township (containing Nelson’s 1840s-era land) and McGavock Township (adjacent to the south and east) experienced general population decline after 1930. Scott Township declined from a peak of 3,593 in 1930 to 1,922 by 1960 to just 645 by 2000. McGavock Township declined from 1,912 in 1930 to 1,629 in 1960 to 728 by 2000.
1970s land patterns. In square-mile examinations of a 36-square-mile section, virtually every square mile had a decrease in the total number of local landowners from the 1960s to the recent era (Figure 3.11). What happened was a move towards consolidation of acreage, and this consolidation trend occurred throughout the Delta from 1960 to 1970. Profitable farms acquired the land held by existing farmers, resulting in a landscape of fewer number of farms and farmers, with the remaining farms possessing much larger sizes than existed in the 1960s.

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122 1962 plat maps showed the two-mile square section plots as containing landholdings by members of 14 families, and an estimated average parcel size of 58.2 acres per farm, including 22 landowners who represent 14 families.

123 The acreage-per-landowner-per-section-square-mile in this section of Mississippi County, Arkansas rose from 127 acres in 1963 to 163 acres in 2007. For example, from the 1960s to the 2000s, Section 35 consolidated from 10 landowners to six landowners; Section 28 consolidated from 10 landowners to four landowners; Section 30 consolidated from 11 landowners to seven. Enumeration of land consolidation across the entire Township shows land parcel agglomerations during the late twentieth century, a loss of 40 landowners, representing a 22% decline.
Hopson Plantation, in fertile Coahoma County in northwest Mississippi, is just three miles southeast of the city center of Clarksdale. The region held by Hopson possessed the associated statistical trademarks of the Delta “core” in 1930 – small average farm size, a dense agrarian landscape, but a valuable and productive agrarian landscape at the aggregate level.\(^1\) Hopson’s location near the city allowed for easier use of “day labor” and experiments with mechanization of cotton production in the 1930s and 1940s, because the proximity to a labor supply in Clarksdale allowed a backup secondary harvest labor pool if machine pickers failed. The city of Clarksdale provided other advantages for Hopson Plantation: the Hopson family farm managers lived in the city rather than on the plantation, avoiding the reliance on the “big house” spatial geographies of other more rural plantation complexes.\(^2\)

When in October 1944 Hopson it harvested the first cotton crop picked entirely by machine, the plantation moved towards full mechanization of all of Hopson’s landholdings. Accordingly, the settlement geographies of Hopson laborers (and other near-Hopson farmers) changed. Using historical U.S.G.S. topographic maps, a variety of spatial changes can be identified\(^3\) In 1935, a dense layer of agrarianism existed, that had diminished greatly by 1968. Using a sample 5-square-mile rectangle east and west of Hopson Plantation, the following population changes occurred: in 1935, the sample area contained 110 homes, while by 1965, the sample area contained 70 homes.\(^4\)

\(^1\) In 1930, the average Coahoma County farm was 27.4 acres large, the fourth-smallest county measure in the state; Coahoma County possessed 17.6 farms per square mile in 1930, the third-highest measure in the state. The average Coahoma County farm in 1930 was valued at about $2266 (1930 dollars), compared to a state value of just $1313 (1930 dollars). 1930 United States Census, “Mississippi”.

\(^2\) 1940 U.S. Census, Mississippi, Coahoma County, Clarksdale, 14-18, Page 1.

\(^3\) Specifically, Clarksdale, Mississippi occupies the location of Township 27 North, Range 4 West, with Hopson Plantation occupying the location of Township 26 North, Range 3 West.

\(^4\) In an adjacent township (Township 27, Range 4 West, Section 36), declined from 15 houses in 1935 to a single residence by 1968.
Of great interest are the spatial clusters of residential settlement. Using a defined cluster on either immediate side of the Sunflower River, within 1.5 miles of Hopson to the west, both the 1935 and 1968 maps show evidence of about 20 different homes in the area. In 1935, the 20 homes are nearly evenly spaced throughout the rural farmland, including a sparse, spread out settlement pattern along Sunflower River (Figure 3.12). Conversely, in 1968, the 20 homes are virtually all clustered along the banks of the Sunflower River in near-linear fashion (Figure 3.13). These settlement shifts, from wide-open-rural to clustered-rural, are evident in other parts of the Mississippi Delta.\footnote{Aiken (2010), p. 134. Aiken wrote about a mechanized farm, noting that its “fields were reorganized, abandoned houses were razed, and the remaining 50 dwellings were moved into lines along roads.”}

This change is far from trivial: the spread-out nature of the 1930s suggests long-term tenant farming, with individual homes generally located in the midst of the land the home’s residents would farm. In the 1960s, however, in an age of day labor and mechanization, a riverside cluster of homes is understandable, considering the decline of tenant farming. Perhaps the scattered landscape of settlement that exited in the 1930s had by the 1960s become a hindrance to development, as spread out sharecropper homes were simply “in the way” of a more efficient, machine-picked, larger-scale type of farming. Hopson “Plantation” today bears little resemblance to the large-scale hand-picked cotton complex of the past.\footnote{The farm has moved from profiting solely from cotton production to profiting from the idea of cotton production, and the post-1970s Hopson has become a tourist site.} And continued depopulation and settlement disappearance, a result of the breaking point of economic decline reached by 1970, has continued after 1970.\footnote{The corporate boundary of Clarksdale encompassed the nearby intersection of Hopson Road with U.S. Highway 49 in 1980. The same five-square-mile rectangle used to investigate sections of the 1935 and 1968 maps displays no settlement by 2011, only open farmland.} Machine progress changed the nature of picking cotton, but it also appears to have changed the nature of where cotton pickers lived.
Figure 3.12: Hopson Plantation circa 1935. Rural settlement is widespread.

Figure 3.13: Hopson Plantation circa 1968. Rural settlement is now sparse, except near Hopson.
The town of Webb sits in the overwhelmingly rural Tallahatchie County, Mississippi. The lack of a central city in west Tallahatchie County meant the vast majority of its 36,000 citizens were living as farmers or farm workers far away from town: in 1930, 88% of the population lived in unincorporated rural land. In 1930, over 90% of Tallahatchie farms were tenant farms. The small size of local towns such as Webb did not inhibit wider commercial connections, including banks, cotton gins, mills, and so forth. These small towns were also incredibly “local” populations, with over 90% of residents (and nearly 80% of a both parents of each resident) Mississippi-born. Residential segregation was apparent: in 1930, Webb was 32% black, while the total Tallahatchie County population was 68% black, and these figures explain a different social geography. Whites were more likely to live in the incorporated town, with jobs other than agriculture, while local blacks, with limited economic opportunities, resided outside the town near the farm – the place of employment.

Webb’s land parcel changes can be tracked through land-parcel data. In the 1920s, the Yazoo and Mississippi Valley Railroad line was the center feature of the town. After 1940, the town of Webb stagnated when faced with an exodus of rural farm workers. By the 1960s, ongoing improvements to highways signaled the advent of governmental intervention, as did the purchase of land for military facilities by the U.S.

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131 The 1930 populations of Sumner, Tutwiler, and Webb were 618, 875, and 531, respectively.
132 “Table 2-Population of Principal Cities From Earliest Census to 1930”, p. 582. In 1930, records show that 73% of Coahoma County’s 46,237 residents lived in unincorporated rural land in the county.
133 Tallahatchie tenancy range from 78% in 1900 to 84% in 1910 to 87% in 1920 and 91% in 1930.
135 In 1920, near the height of historical American immigration patterns, a randomized sample population schedule from Webb, Mississippi shows 90% of residents were born in Mississippi, with 80% of residents' fathers born in Mississippi and 76% of residents' mothers born in Mississippi. 94% of residents, 94% of residents' fathers, and 92% of residents' mothers were born in some part of the American South. 1920 U.S. Census: Webb, Tallahatchie, Mississippi; Roll: T625_895; Page: 1A; Enumeration District: 89; Image: 517. Sample of 50 residents and 13 families, with 49 out of 50 residents self-identifying as “white”.

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government. Webb also exhibited a high degree of a continual class of elites. Several of the landowners in town in the 1920s and 1960s are still major landholders in the town by the late 1970s, and the bulk of land parcel transfer turnover analyzed appears beyond a town’s administrative boundaries, in the farmland.

Tallahatchie County experienced what could be described as a total collapse in family farms: in 1930, Tallahatchie had 7,298 farms; by 1970, had just 789 farms – an 89% decline. In 1930, Tallahatchie County had 7,004 farms producing cotton; by 1970, there were just 571 such farms, a 92% decline. The value of all farm property in Tallahatchie in 1930 was higher – even in unadjusted dollars – than 1970.\textsuperscript{136} In the county, small farms routinely were acquired by (or merged with) more powerful farms, until the end result was a farm system with bigger and bigger farm sizes by 1970 (Figure 3.16). In 1930, 94% of all farms in the county were less than 100 acres in size; by 1970, just under 37% of farms were less than 100 acres. Less than 2 percent of farms in 1930 were 260 acres or larger; by 1970 that percentage of the largest farms grew to over 37% of county establishments. The average farm in Tallahatchie County in 1930 was 37.8 acres in size; by 1970 the average farm was 333.5 acres. Forty years of change in Tallahatchie County had brought fewer farmers and larger farms (Figure 3.14).\textsuperscript{137}

The summation of these changes could be described as the decline and fall of Webb and Tallahatchie County, with a downturn beginning in 1930. Tallahatchie County’s population peaked in 1920 and 1930, at just under 36,000 persons. By 1970, the county population fell to about 19,000, where it stagnated, and then slowly declined

\textsuperscript{136} Aggregate value was $16.6 million dollars in 1930 and $16.4 million dollars in 1970.\textsuperscript{137} The average cotton-producing farm throughout Mississippi by 1970 was 42.8 acres, while the average cotton-producing farm in Tallahatchie County by 1970 was larger and more productive 101.2 acres. Similar increases in average acreage of cotton farms occurred throughout the Delta in Coahoma County (average cotton farm acreage of 186.2 acres in 1969) and Bolivar County (average acreage of 119.9 acres in 1969.)
to the roughly 15,000 citizens today. The massive loss of people from 1930 to 1970 had enormous effects on local business, economic demand, and tax receipts.

Today, a morphological study of Webb yields a familiar economic geography. Many of the storefronts on Highway 32’s old business district are abandoned, the railroad that gave transport connectivity to Webb is mostly quiet, and the modern “business district” is a series of service industries along U.S. Highway 49 East away from the historic town core. Gas stations and banks, farm equipment and auto parts stores all form an array of the new Webb downtown, with an automobile-accessible business district. Webb’s “downtown” moving from the river and rail to the highway is a hallmark of the post-1970 “New South”. The stipulation in this urban analysis, however, is that Webb, like nearby Sumner and Tutwiler, remains a tiny place amidst a county whose population peaked over 80 years ago. Sweeping changes in land use and spatial organization have far different long-term effects when the canvas is an overwhelmingly rural region.

**Figure 3.14:** The collapse of small farms in Tallahatchie County, 1930-1970, U.S. Agricultural Census.
Tucker is an unincorporated settlement cluster in Jefferson County, Arkansas located at the far western edge of the historic Delta cotton belt. However, Tucker sits among an earlier cotton plantation landscape dating from the 1870s. In the twentieth century, both paid day labor and semi-permanent sharecroppers worked Tucker Plantation’s farmland, and the Plantation complex, with on-site commercial buildings, exhibited a high degree of commercial localism. Tucker Plantation is noteworthy in that ownership and management of the core acreage has stayed within the Tucker family into the twenty-first century, so historical comparisons of land ownership patterns are possible across the twentieth century using primary sources of land parcel data.

When examining the 36-square-mile section centered on Tucker Plantation and the community of Tucker, identified as Township 3 South, Range 9 West, two distinct patterns are visible: a near-oligarchic level of consolidation and an apparent high degree of fragmentation. First, consolidation of land into the ownership of a few particular landowners is high. In 1905, of the possible 23,040 owned acres in the 36-square-mile section, just ten families owned approximately 12,340 acres, or 53% of the land. Two

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138 The immediate Tucker area is devoid of manufacturing, light or heavy, although the region has supported a large prison for most of the twentieth century: the Arkansas Department of Corrections’ Tucker Unit, established in 1916, became the location for Arkansas capital punishment from the 1920s to the 1960s. Accordingly, several Delta states’ state penitentiaries are located within the historic cotton belt, including the Louisiana State Penitentiary (Angola Prison) in West Feliciana Parish, Louisiana and the Mississippi State Penitentiary (Parchman Farm) in Sunflower County, Mississippi.


141 Family ownership was tabulated by identifying parcels with the same individual landowner, or same initial and last name. “Ownership” for this tabulation also included joint ownership, such as 320 acres owned by “Watson” and “Cherry”, which were allocated to Watson for calculation purposes of the leading landowners, or parcels owned by “Morse John Tucker et al” which were similarly allocated to Tucker. Named corporate entities were allocated to a particular last name: lands designated as owned by “Tucker S E Plantation Llc” were allocated to Tucker, and “Triplett C H Co” parcels were allocated to Triplett.
of the three largest landholding families in 1905, Tucker and Triplett, owned over 3,700 acres combined. Given the high tenancy rates (82% in 1910 and 86% by 1930), the degree of accumulation by a small amount of families is noteworthy. Historical population counts are imperfect, as cadastral township-and-range systems do not align with Arkansas township boundaries (the political unit of census enumeration in rural areas), but estimates of about 2,630 people in 1910 are possible. In 1905, roughly 2,000 residents lived on 36 square miles that were dominated by just 10 landowning families: a clear sign of near-oligarchic control. By 1950, as well as in 1905, fragmentation levels were high (Figure 3.15). In 1905, the average number of held land parcels of these ten landowners was 3.6 separate pieces of land, cumulatively holding about 1264 acres.

Various measures of fragmentation are possible. Divided land plots can also be compared using a measure of extents across space. By 1950, a total of 4800 acres owned by the top three landowning families yielded 37 separate landholdings, for an average landholding of 130 acres per “separate” farm.

Fragmentation of farmland proved problematic during the early and mid-twentieth century for a variety of economic reasons: additional transportation costs are borne by the movement of machinery, labor, and draft animals from parcel to parcel. Farm processes from planting to harvesting to ginning to airborne fertilizing consume more time when

142 A measure of cumulative land parcel perimeters is appropriate for expressing the degree of fragmented parcels. In the sample 36-square-mile-township from 1905, the average total acreage was about 1.97 square miles of total land. Under a cadastral system where land parcels have equal length and width, a parcel of 1.97 square miles would possess a perimeter of about 5.6 linear miles. If the 1.97 square mile parcel was distributed among (nearly) equal square miles, such as two contiguous square miles available for purchase in the Plains states under the nineteenth-century Homestead Act, that parcel’s perimeter would measure nearly 6.0 miles. However, in the sample township near Tucker in 1905, the average 1.97 square miles of total land parcels averaged a perimeter of 12.0 linear miles.

143 Given a 1.97 square mile average area, extents of 1.44 miles each, or 1 mile by 2 miles under traditional landholding divisions, would be expected. However, the average spatial extent of the ten largest owners in the 1905 sample measured 2.6 miles by 3.6 miles: an average 1.97 square mile landholding was spread across 9.5 square miles of rectangular space.
farms have non-contiguous parcels. Social control of wage labor farmhands is more difficult with fragmentation, with supervision spread thin. Not all waves of “change” were exemplified by complete changeovers of landowners and landholdings. The persistence of a small set of principal landowners in the immediate area of Tucker is instructive in explaining yet another reason for the “death” of the Delta. By 2010, Tucker and Triplett still amassed large portions of the cadastral township, combining for over 4,700 acres in the twenty-first century for 21% of the section land. And fragmentation persisted to 1950 and beyond. The near-oligarchic land ownership control by few families among wider Delta regions continues to the present-day.

The persistent power base of similar landowners symbolized a cotton South locked in the past while the post-World War II non-cotton South moved toward urbanization, industrial investment, and broader economic development. Even with all of the radical changes that transformed and dismantled the Plantation-style agrarian life in the Delta during the twentieth century, land ownership concentrations by the two largest landholding families had increased. With land ownership concentrated in the hands of the same elite families for the duration of the twentieth century, upward mobility in land ownership and in socioeconomic status was severely limited. For a young family in

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144 Including “Morse John Tucker et al” landholdings.
145 Using the common economic measure of the Gini coefficient, areal regions can be indexed by the degree of relative income inequality: a value of “0” represents total income equality (all residents have equal incomes) and a value of “1” represents total income inequality (one resident has 100% of total income of an entire region). The average Gini Index from 2006-2010 by United States county was calculated by the U.S. Census Bureau using data from the American Community Survey. The Mississippi Delta stands apart as one of the largest geographical areas (including a large number of counties) in the United States with contiguous clusters of Gini coefficients in the highest quintile (0.461 to 0.645). “Figure 1: Quintiles of Gini Index by County: 2006-2010.” Household Income Inequality Within U.S. Counties: 2006–2010, 2012. Approximately 3,000 acres are mapped by Marceline Mapping as “subdivided” lands. These parcels are not arranged in the spatial arrangement of the early twenty-first century “subdivision” familiar to American suburbs such as Plano, Texas or Aurora, Colorado. Satellite imagery shows large parcels and few houses. If Tucker or Triplett families own any of these parcels, the landholding percentages of Tucker and Triplett may combined for far more than 20.6%, to more than a third of all land in the township.
Tucker in 1950, owning a “new” home in Little Rock 30 miles to the west was preferable to renting or working the local Tucker land held by the same familiar half-dozen families.

Figure 3.15: The persistence of a landowning elite: fragmentation and accumulation over time in Township 3 South, Range 9 West near Tucker, Arkansas. Throughout the twentieth century, three families: Tucker (shaded blue), Triplett (shaded red) and Niven (shaded dark green) began from a central core of landowning in the southeast center (1905), which, by mid-century, holdings had increased in small parcels of usually 40-acre blocks to the west of the township (1950). By the twenty-first century, only Tucker and Triplett remained as landowners, but a move to large, consolidated parcels had occurred (2010).
The clear quantitative evidence of land parcel division and transfers presented in this chapter, along with a longer discussion of comparative advantages and disadvantages of Delta cotton production, suggest that the end of the cotton Delta, while brought about by national and global shifts in cotton production from California to China, was carried out by the culmination of the decisions of many disparate individuals. These decisions included farmers deciding to sell land to neighboring farms, farmers deciding to sell land to large agribusiness concerns, farmers deciding to abandon land after a period of indebtedness, and bankers deciding to foreclose or repossess land after a farmer’s nonpayment.

Land division or tenant farming did not cause Delta changes; rather, these comparative disadvantages were signals of change within a wider cotton world. The Delta’s production characteristics, organizational qualities, and tenant farming arrangements, while aiding production for many decades, had become clear comparative disadvantages in the face of national and global cotton production after 1930. The position of the Delta compared to other producers was diminishing, and by 1970, the landscape of cotton production in the Delta had reached a permanent tipping point away from the dense agrarian hand-picked cotton world that had existed before 1930.

However, the comparative disadvantages discussed in this chapter have been largely agricultural in their focus. Chapter 4 addresses the reality that as cotton agriculture in the Delta was receding, individuals, businesses, and governments attempted to reshape (or merely rescue) the region through economic development that was as diverse as federal acreage programs and industrial assembly for the Apollo space program. Ultimately, most industrialization occurred beyond the cotton belt in Delta
states, and each state’s cotton core showed little signs of “development” by 1970. Further hindering a cotton core development was the role of the local financial sector in the Delta’s decline.

This chapter analyzed the multiple systemic disadvantages of Delta cotton farming and farmland that led to the collapse of the Delta’s traditional modes of cotton production between 1930 and 1970. Early twentieth-century Delta land parcels were too small for productive agriculture in an increasingly capital-intensive mechanized farming era. High rates of tenancy (a Delta core with tenant farming rates of over 80% of farms) led to eviction, debt, and a lack of savings for future investment. In addition, cotton production in the early twentieth century Delta South was subject to wild price swings, which further indebted sharecropping farmers that were reliant on a single year's harvest for working capital. Additionally, the manner of cotton farming on an over-farmed and over-blighted Delta was not environmentally sustainable in the long-term, leading to wider changes throughout the late twentieth century.
Chapter 4: Economic Development Attempts and Industry

In July 1947, Sam Houston Jones gave an address at the Mississippi “Farm and Home Week” in Starkville, Mississippi. Discussing the necessity of industry in this predominantly agricultural region, Jones cautioned his Delta audience of a cotton sector whose future was in doubt, warning “so much is happening in the South, and so fast, that it is difficult to view the change in proper perspective... The economic South is in a state of unprecedented upheaval. The agricultural South is in a state of transition... The solution, of course, cannot lie wholly in farm employment.”¹

Such arguments of “development” were rarely taken seriously in the Delta South before the turmoil of the Great Depression and World War II changed cotton production both in and beyond the Delta core. Southern leaders had pushed for economic development since the 1850s, and Delta state calls for industrialization in particular had occurred since the end of the nineteenth century, but to no avail: regardless of “New South” boosters, the success or failure of each year’s cotton harvest was the dominant economic determinant for the Delta.²

The previous two chapters discussed the national and global changes in cotton production, as well as the comparative disadvantages of local Delta cotton production, both of which influenced the transition away from plantation-style cotton farming in the Mississippi Delta. While the cotton areas of the Delta counties entered steep economic decline after 1930, the larger economic situation of Delta states did improve somewhat

¹ Jones, Sam H. “Interdependence of Agriculture and Industry.” Mississippi State University Farm and Home Week. Starkville, Mississippi, July 25, 1947.
² For example, in 1900, the United States Census summarized contemporary thinkers, noting that “…whatever affects the commercial condition of the crop for any year affects the economic condition of the entire South.” 1900 United States Census of Agriculture, 1900, p. 406.
by 1970 due to increased manufacturing, more modern infrastructure, and investment in extractive industry. However, this growth generally occurred beyond the cotton belt, resulting in a stark dichotomy by 1970: the ex-plantation cotton regions were economically struggling, while the surrounding non-cotton core regions in Delta states were economically thriving.³

This chapter focuses on the economic development of the Delta, signaled by a wave of predominantly near-Delta manufacturing attempts. These nodes of potential industry included government-funded or government-contracted defense plants built during World War II, and extractive industries intent on exploiting natural resources such as timber, coal, or oil. Successful nodes of development attracted ex-cotton workers who served as labor inputs for the nascent manufacturing sites. These ex-cotton laborers left the farm as part of a wider rural outmigration from the Delta.

It must be noted that industrialization and economic development in this chapter are rightfully couched as “attempts”: in the Delta core, continued poverty and economic decline were apparent by 1970, a decline that persists past 2000. Most factory locations or in-Delta industrialization quickly turned to bust over boom. State-backed development attempts, such as Mississippi’s mid-1930s “Balance Agriculture With Industry” program, were ultimately abject failures within the Yazoo Delta corridor. Limiting factors on development included the endemic disadvantages of the Delta plantation-era cotton production systems defined in Chapter 3. These comparative disadvantages in many instances were holdovers of the antebellum era.⁴ Eugene Genovese succinctly

³ Economic growth occurred in the cotton core for the successful few mechanized large commercial farms in the area.
⁴ Particularly the Delta regions that were not swampy bottomland in 1860, including Natchez or Memphis.
encapsulated these legacies, writing that “plantation slavery so limited the purchasing power of the South that it could not sustain much industry.”

Alternatively, regions historically beyond the cotton fields lacked these destructive systems of land tenure and division. Accordingly, the more successful sites of long-term industrialization were usually located in these non-cotton realms. Generally, non-cotton-belt economic growth in the Delta states has continued beyond 1970 to the present. Such economic growth can be best assessed as part of a larger movement of “Southern” or “Sun Belt” economic growth, usually framed as occurring post-World War II. An array of factors produced this super-regional development in the South, including little union activity, low corporate tax rates, and an increasingly favorable climate as air-conditioning systems became more commonplace. This chapter also includes special consideration of the Delta’s changing financial sector and transportation systems.

4.1 What Cotton Economics Wrought: Measures of Delta Development

The economic situation of the Mississippi Delta by the late twentieth century was best described as widespread poverty coupled with extremely low human development indices. Poverty measures ranked the Mississippi Delta in the early twenty-first century as one of the poorest parts of America, similar to Appalachian Kentucky or American Indian Reservations in South Dakota. However, the Delta economy in 1930 was hardly

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5 Genovese (1989), p. 173. Henry Clay similarly described the destructive legacy of slavery on economic development over a century before Genovese, writing that “Every farmer bought out by the slave system sends off the consumers of the manufacturers of the town: when the consumers are gone, the mechanic must go also... A home market cannot exist in a slave state.” Clay, Writings, p. 179, 227.
6 Such regions of growth in Delta states include northwest Arkansas and Mississippi’s Gulf Coast.
better than this post-1970 poverty. The Delta of 1930 was a region with a large agrarian population of mostly tenant farmers whose financial fortunes were subject to cotton market price swings, environmental catastrophe, and a cycle of indebtedness through sharecropping that relied on good harvests to pay back the cost of furnished seed, tools, and food. In some parts of Delta states, those lucky few individuals wealthy enough to avoid sharecropping were still residents in a wider South that experienced total Civil War destruction of crops and property just two generations in the past. That the Delta in 1930 and 1970 was “poor” is inarguable.

In fact, the poverty of the Delta states was not altogether unknown to Delta residents; they were acutely aware of the existing lagging economic indicators in their states throughout the twentieth century, and the perception that their states held. When discussing various development and health figures of the Mississippi published in the 1900 Census, H.E. Blakeslee noted that “Mississippi was not the state of malarial poison and pestilence that it was too generally believed to be.” But the region of poison and pestilence is what grabbed American imagination. In 1954, the American Mercury magazine in an article entitled “What’s Wrong With Arkansas?” argued that Arkansas was rightfully identified with an assortment of poverty-stricken stereotypes, including “malnutrition and mental debility, hookworms... shoelessness, illiteracy... hillbillies and paddlefeet who cannot seem to pronounce correctly the name of their native state.”

These stereotypes of Delta poverty were not unfounded, as Delta states (and in-state Delta regions) exhibited particularly dreadful economic development indicators

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from 1930 to 1970. While modern poverty rates incorporate the Consumer Price Index, family sizes, and geographic areas, these statistical measures were initially developed during President Johnson’s “War on Poverty” in the mid-1960s. Blanket comparisons of poverty rates between the 1930s and 1970s are problematic. However, detailed comparisons and relationships may be provided through economic data such as wages, and developmental data including amenities and access to technology.

The average annual wages (unadjusted for inflation) of retail workers in 1930 was lowest in the Southern region of the United States, with Mississippi (average salary $1017), Louisiana (average salary $1022), and Arkansas (average salary $1073) ranked 48th, 45th, and 43rd, respectively, out of 48 states – the lowest cluster of wages in the country.\(^9\) Mississippi’s average retail wage was 22% lower than the national average, and the city of Memphis ranked as the 87th lowest wage ($1165) out of 93 large U.S. cities. For all wages, in the "North Central States" (the Upper Midwest and Great Lakes area), the median wage in 1939 of males in rural regions was $590 versus $426 for "the South". But the main disparity was in Southern and Delta cities: wages of $868 for urban-working males in the South compared to $1212 for urban-working males in the North Central states, for an overall average male wage in 1939 of $1089 for the North Central and $635 for the South.\(^10\) By 1944, even with some wartime Delta-state industrial development by the federal government, Mississippi and Arkansas came in dead last among southern states in measures of per capita income and buying power.\(^11\)

\(^9\) “Table 2: Retail Workers, Average Salaries, and Comparative Pay-Roll Costs, By States.” Census of Distribution. Retail distribution. Special series. Employment and wages in the retail industry, p. 36, 1933.

\(^10\) “Table 1: Persons in the Labor Force in March 1940, By Wage or Salary Income... ” U.S. Census: The Labor Force: Wage or salary income in 1939. 1943. p. 21

\(^11\) Mississippi Agricultural and Industrial Board. "Plan of Action for Community Development." Pamphlet, p. 1, about 1945. Per capita income alone in 1944 was $569 for Mississippi and $615 for Arkansas.
Only 33% of homes were owner-occupied in Mississippi in 1940, the lowest state average in the country. This disparity was magnified in the rural Delta: in 1930, 90% of homes in rural farming regions in Maine were owner-occupied; 79% of similar rural farm region homes in Wisconsin were owner-occupied; just 28% of rural farm homes in Mississippi were owner-occupied, the lowest measure in the country, with only 32% of Louisiana rural farm homes measuring as owner-occupied.  

Human development metrics for the Delta states were equally revealing, and mid-twentieth-century Delta communities markedly lagged behind non-Delta communities. In 1930, the illiteracy rate for the United States was 4.8%. For agrarian states in the north, the illiteracy rate in Iowa was 0.9% and the illiteracy rate in Nebraska was 1.3%. For agrarian states in the Delta South, the illiteracy rate in Mississippi was 14.8% and the illiteracy rate in Louisiana was 15.1%. The development divergence was clearer when comparing in-Delta and out-of-Delta counties, as well as examining the performance of disadvantaged demographic groups. In 1930, Mississippi’s illiteracy rate was 5.5% for native-born white males in rural farm households and 35% for black males. Delta farms fared far worse than cities: urban illiteracy rates were much lower than on the farm, for both white and black persons, with 1930 illiteracy rates of 1.6% for urban white males and 23.5% for urban black males, marked improvements compared to Delta farms.  

In Mississippi in 1960, the Census of Housing measured the rates of various indoor plumbing amenities. The Delta/non-Delta divide is apparent: when measuring the percentage of housing units that had hot and cold water piped inside the home, the Gulf

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14 1930 Census, "Table 7 - Illiteracy, For the State, Urban and Rural: 1930 and 1920". All measures are calculated as “males over 20 years old.”
coast city of Pascagoula measured about 92% while the Delta city of Yazoo City measured about 58%. When measuring the percentage of homes with a bathtub or shower for exclusive use, the inland southwest Mississippi town of McComb measured about 92% while the Delta city of Clarksdale measured about 66%. The in-state Delta cotton regions could be economically described as impoverished states-within-a-state.

Beyond human development indices, measures of a variety of technological standards of living are helpful in determining the scale of Delta poverty. Technological change had long been a driver for regional change in the Delta. Cotton production near the Mississippi River was only possible (and profitable) after widespread adoption of Eli Whitney’s cotton gin; the region was otherwise full of tobacco plantations (and, farther south in Louisiana, sugar plantations). A modern parallel of technology driving Delta change is air conditioning, a technology that made the formerly stifling climate of Delta summers livable.

The fruits of the industrial revolution were a long time coming to the Delta. State measures similarly show poor figures for the Delta states, but perhaps none so divergent as a combined measure of energy, calculating “horsepower per capita” based on a census of steam turbines, steam engines, internal combustion engines, and hydro-turbines. In 1932, the United States averaged 0.38 horsepower-per-capita. The measure was as high

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15 1960 Census of Housing, Part 5. “Table 22 – Tenure, Vacancy Status, and Condition and Plumbing Facilities, for Places of 10,000 to 25,000 Inhabitants: 1960.”
16 Southwest Mississippi was largely populated by tobacco plantations in the British-settled “Natchez District” in the late eighteenth century. However, by 1800, the rapid adoption of Eli Whitney’s cotton gin allowed area plantations to shift to cotton production completely. This “other” cotton heartland in Mississippi (south of the Yazoo, which was still swampy bottomlands until the late nineteenth century) became a major source of antebellum cotton production. Stephen Duncan of nearby Issaquena County, Mississippi, held 858 slaves in the 1860 census (and was rumored to own over 1,000 slaves in the antebellum period), making him the second-largest slave owner in America at the dawn of the Civil War. See Blake, Tom. “The Sixteen Largest American Slaveholders from 1860 Slave Census Schedules.” 2004.
17 Air conditioning in Delta states increased from 20% adoption in 1960 to over 70% adoption by 1980. See Arsenault (1984), p. 611.
as 0.90 in New Hampshire, and the states of the Great Lakes region averaged 0.44; Mississippi averaged 0.04 horsepower-per-capita, by far the worst energy measure in the country. With Arkansas a clear second-worst measure at 0.11, cotton’s mechanization and the radical change that machines brought to fields seems more significant. In the early 1930s, Mississippi was the state with the third fewest miles of telephone wire east of the Mississippi River. In 1932, there were 6 persons for every phone in the state of Vermont; in Mississippi, there were 32 persons per phone.\textsuperscript{18} This technological-development divide was not simply a product of overwhelming ruralism or farming communities; in 1927, the number of telephones in the combined Delta states of Louisiana, Arkansas, and Mississippi was roughly the same to the number of telephones in a single Midwestern agrarian state, Kansas.\textsuperscript{19}

Electrification was extremely low in the Delta states compared to the rest of the South, which allows for additional comparisons as the Delta as explicitly “different” developmentally than Georgia or South Carolina. In 1927, for example, Alabama consumed 1.27 billion kilowatt-hours; North Carolina consumed 2.03 billion; Texas consumed 1.81 billion; West Virginia consumed 1.90 billion. Mississippi, by contrast, consumed just 64 million kilowatt-hours in 1927, a 20-to-1 disparity between the bordering states of Alabama and Mississippi. Arkansas’ consumption of only 174 million kilowatt-hours was outpaced by neighboring Missouri at a 5-to-1 disparity.\textsuperscript{20} In fact, a low number of specific statistics on Delta states’ electrical use near 1930 are simply unavailable, because so few firms had electrical power, that the Census Bureau

\textsuperscript{18} Census of Electrical Industries, 1932. Telephones and Telegraphs, p. 3.
\textsuperscript{19} Table 13: Telephones. Census of Electrical Industries, 1932. Telephones and Telegraphs, p. 21.
could not publish several metrics for Mississippi, Arkansas, or Louisiana at the state level, for fear of personally identifying individual businesses. States were grouped together with neighboring states to alleviate this problem.

The Delta world of incredibly low rates of infrastructure development would be part of a larger South whose lack of electrical access was partially ameliorated by the creation and expansion of the Tennessee Valley Authority, established in 1933, and the Rural Electrification Administration, created in 1934. The vast majority of farms were electrified by the 1950s. However, the very high poverty rates were not so easily alleviated. Low wages, low rates of land ownership, and low development throughout the region were detriments to most attempts at economic development in the Delta core after 1930. Compounding this disastrous economic situation, the local financial system was facing several disadvantageous headwinds, including a realized oversaturation of banks in small areas, an inward-looking localism for financial transactions, a very high rate of mortgages during and after the Great Depression, and a local economy whose monetary value was largely assessed via the farmland itself.

4.2 The Financial Sector and Delta Decline

In 1938, President Franklin Roosevelt stated that “the South presents right now the nation's No. 1 economic problem...”21 This sentiment echoed the deplorable economic indicators of the South (and Delta in particular) during the Great Depression. Amidst a series of repeated economic shocks sustained within a short period around 1930, much of the financial underpinnings of the Delta cotton economy began to unravel.

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The cotton Delta’s economic decline was closely related to a collapse of local and regional financial sectors. However, the financial systems of the Delta and the wider South were not thriving before 1930; a long history of economic disadvantages had existed in the region for nearly a century.

Historically, external factors had played a major role in deemphasizing industrial development, dating from the Civil War era. The South as a whole faced severe financial disadvantages from the war, both directly and indirectly. Widespread destruction of homes, barns, farms, and livestock led to declines in real property values, and land values across the South immediately declined post-war. Further war effects hampered local economies: in 1866, Mississippi spent more than 20% of its state budget on artificial limbs for Confederate veterans, and dozens of courthouses were burned during the Civil War, permanently destroying land records and titles.  

Emancipation rightly brought freedom for nearly 4 million enslaved persons, yet uncompensated emancipation not only meant the loss of wealth of white slave owners, but also the loss of the ability of former slave owners to make future capital investments in the region. Without slave-era “property” to sell and (crudely) profit from after 1865, Southern elites had little capital to invest for the building of factories or railroads, leaving local investment power in the hands of self-interested northern businesses.

One such example was the “Pittsburgh Plus” pricing system, which sought to prevent the development of Southern coal or iron industries. These industries ought to

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22 Oshinsky (1997), p. 11; The term “burned counties” initially described counties in Virginia that sustained partial or total record loss in courthouse fires. Sources claim at least 14 county courthouses in Georgia were burned during the Civil War, some by General Sherman’s “March to Sea”. The Delta-located Bolivar County, Mississippi, had its courthouse burned at the old county seat of Prentiss during the war.

23 Such lost “wealth” representing the grisly economics of selling other human beings must be unfortunately addressed in financial histories of the Civil War South.
have thrived given the South’s local deposits of coal and iron (which ought to have
translated into low transportation costs from Southern mines to Southern factory
processing sites.) However, northern corporate interests in the 1870s and 1880s,
especially Pennsylvania’s steel industry under Andrew Carnegie, were able to manipulate
costs of southern steel. Prices for steel were based upon production and transport costs
from Pittsburgh, regardless of the actual origin of produced steel (hence “Pittsburgh
Plus”). As a result, Pittsburgh-area steel producers could remain profitable against steel
producers throughout the U.S., regardless of any financial disadvantages that would
otherwise hinder Pennsylvania-area price competitiveness.24

There were more Southern financial disadvantages in the late nineteenth century.
Smaller but similar sorts of “added” charges per cotton bale were made by New York-
dominated cotton financiers in the late nineteenth century. Additional northern financial
manipulation occurred with the “greenback” currency pushes in the 1880s. And after the
Civil War, debt crises were apparent as individual state government debts became
unmanageable to quickly repay. These cycles contributed to the accurate description of
the South as a “capital-starved region” from the end of the Civil War through the middle
of the twentieth century.25 Such devastation destroyed Southern income levels for
decades, preventing entrepreneurial activities.26

The relative lack of capital in the South (and Delta) are important limiting factors
in the region’s lack of economic development because much of agrarian life in the Delta

24 See Warren (2001) for more detail. Warren details the reaction against the “Pittsburgh Plus” pricing
system, culminating in a Federal Trade Commission “cease-and-desist” order in 1924 and an unfavorable
Supreme Court judgment in 1948. Warren noted the manipulation, writing that in the 1920s, “the
agricultural-machinery maker Deere and Company of Moline [Illinois] consumed 100,000 tons of steel a
year on which they paid $488,000 to cover ‘Pittsburgh Plus’ pricing – an extra charge that, as their witness
made clear, the company passed on to the farmer.” Warren (2001), p. 49.
26 Per capita incomes were 72% (1860), 51% (1880), and 62% (1920) of U.S. the average. Rabinowitz, p. 6.
had long required high initial costs. In 1870, in the Delta-edge county of Wayne County, Tennessee, data from the U.S. Department of Agriculture suggests the following prices: $106 for a mule, and $85 for a horse.\footnote{Moore, Gerald K. “The 1870 Census of Agriculture, Wayne County, Tennessee”}

Considering the average annual wage for workers in “cotton goods” industries in Tennessee in 1870 was about $200, outright purchases of beneficial farm implements was challenging without capital.\footnote{See table, “Cotton Goods – Not specified below” in The Statistics of Manufactures: United States 1870 Census. Annual wages for industrial workers specifically in Wayne County range from $200 to $400.} This lack of capital wealth, either monetary or inherited property, proved problematic for Delta farmers as the twentieth century’s increasingly mechanized landscape required high up-front costs. The disparity between North and South, then, is understood: in 1930, there were over 66,000 tractors in Iowa compared to just over 5,500 tractors in Mississippi. In 1930, just under 30% of Iowa farms had a tractor; less than 2% of Mississippi farms did.\footnote{1930 Agricultural Census. County Table XII: Farm Machinery, 1930” for Iowa, Mississippi.}

The Mississippi Delta experienced significant shocks of financial-system collapse in the beginnings of the Great Depression. While over 600 bank failures occurred in the South and Midwest in a two-month period in 1930, Mississippi and Arkansas faced particularly severe declines.\footnote{Hamilton (1985), p. 581-583. These failures included Nashville-based Caldwell and Company, “the South’s leading investment house”.

In 1930, Arkansas had 134 bank failures, more than any other state, and that same year Mississippi had 59 bank failures, the seventh-highest bank failure rate in the country. These 1930s bank losses were more impactful on a local level because Delta state banks had escaped the financial institution collapse of the 1920s.\footnote{Bank failures in the 1920s were primarily located in the Midwest, with highest failure rates in Iowa, the Dakotas, Minnesota, and Nebraska, compared to Mississippi (an average of just 6 bank failures per year in the 1920s) and Arkansas (an average of 10 bank failures per year in the 1920s). Hamilton (1985), p. 586}

The twin environmental pressures of flooding in 1927 and drought in 1930 wreaked havoc on cotton agriculture, as discussed in chapter 3; cotton production fell at least 23%
in a single year’s time – from 1929 to 1930 – in Tennessee, Arkansas, and Mississippi. Even with falling supply, the price declines associated with general economic downturn meant that Delta farmers produced less cotton for less income, and had fewer bank deposits with increased bank lending.32

Complicating the financial collapse was the fact that the vast majority of failed banks in the Delta were small, local institutions located in rural regions.33 Additionally, the Delta faced a problem of financial institution oversaturation during the early twentieth century, with too many different banks – not just bank branches, but separate legal financial institution entities – in the cotton-producing regions of northwest Mississippi. Coahoma County, Mississippi was home to 16 separate commercial bank companies in 1909 (Figure 4.1). By comparison, in 2007, the average United States Metropolitan Statistical Area had an average of just 16 separate commercial banks, with the near-Delta Huntsville, Alabama MSA home to only eight different financial institutions.34 (Therefore, a single historical Delta county with population 30,000 had the same number of legal banks as a modern MSA with over 400,000 persons.) Additional studies found that demand deposits, such as monies in traditional checking accounts, held in rural Delta banks declined severely from the mid-1920s to 1930, and Delta banks, particularly in rural Arkansas, had lending-to-deposit ratios of over 90%, while healthier banks that weathered the Depression had ratios closer to 70%.35

33 For example, Citizens Bank & Trust Co. began in Marks, Mississippi in 1917 under the creation of a group of local investors headed by P.M.B. Self. CB&T eventually expanded northward to the outskirts of Memphis, with still-local locations in Walls, Mississippi and Tunica, Mississippi.
34 Excluding bank branch counts of the same bank. See Dick (2007), p. 60.
An agricultural influence on early twentieth century financial uncertainties in the Delta was the environmental reality that all crops (cotton, feed crops and grazing supplies) were affected by drought. Those few farms that diversified away from cotton for financial gains in the 1920s suffered the same as cotton plantations along the Mississippi River. The massive drought of 1930 was so destructive that in the single year shift from 1929 to 1930, the total personal income of Delta “farm proprietors” fell from 686 million dollars to 314 million dollars. This 55% decline of personal income in a year’s time represented 372 million dollars “lost” from potential state taxing authorities in Louisiana, Arkansas, Mississippi, and Tennessee.\[36\]

![Figure 4.1: Banks in Coahoma County, Mississippi, 1909, source: R. G. Dun Business Directory.](image)

\[36\] Schwartz and Graham (1956), Hamilton (1985), p. 590, 603-605. Arkansas deposits fell nearly 42%, Mississippi and Louisiana deposits fell about 22% during this period. Poorer Delta state residents also paid less in taxes, indirectly leading to several state government defaults in the Delta during the early 1930s.
However, as the economic fortunes of the agrarian Delta worsened, the banks that survived the failure wave of the early 1930s were in a powerful position to serve the customers (and deposits) of those banks that succumbed to the downturn. Delta farms’ financial transferability during the Great Depression usually took one of four forms: farms could be sold to another farmer, sold to a bank, sold to the (usually state) government, or foreclosed/abandoned and reacquired by the mortgage-holding bank. A period of increased acquisition of farmland by financial institutions in the Mississippi Delta began in the 1930s. The foci of these acquisitions and changes are not solely the financial institutions, but also are the farms and associated farmland that were often foreclosed on by the mortgage-holding banks that survived the collapse of the 1930s.

The tenant farmer’s position in this changing financial world was perilous. “Renting” cotton farmers had nothing to risk as collateral, so Delta financial institutions were often unwilling to make risky loans to tenant farmers. The difficulty faced by farmers in acquiring capital was compounded by changes in the nature of cotton production. Before 1930, cotton production existed as a largely labor-intensive crop. But by the early 1940s, production had transitioned to a much more capital-intensive mode of production, as chemical fertilizer controls and mechanical strippers were adopted by area farmers. Tenant farmers’ low cash reserves and absence of land ownership were always problematic factors in acquiring loans, but the effects of difficult capital acquisition were magnified in an era that required more and more capital implements or purchases.

Delta farmers not only suffered the inability to purchase machinery due to decreased lending capital; area landowning farmers mortgaged their farms throughout the

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37 2.5 million people nationwide abandoned farms during the Great Depression and “Dust Bowl” era.
The effects of the Great Depression were evident: among Delta counties in Mississippi, more than half of all existing farms were mortgaged by 1940 (Figure 4.2). In some cotton counties, this mortgage rate extended to nearly two-thirds of all farms. By contrast, the non-Delta Mississippi counties were largely unmortgaged, with no counties in southern Mississippi possessing farm mortgage rates of 30% or above. Because of the concentration of land- and agricultural-based wealth in the Delta core, however, cotton’s economic troubles had rippling effects throughout the state. Holley noted that, due to the high percentage of landowners who could not pay taxes combined with the rolling schedule of foreclosure and land auction dates, on a single day in April 1932 “a quarter of the entire state of Mississippi went on sale at auction...”

The Delta-heavy mortgage patterns were especially destructive due to the heightened importance of land to a local farm’s total value. An examination of the rate of land as a percentage of total farm value details a Delta concentration that was decades-old. Perhaps the starkest mapping of Delta and non-Delta conditions can be seen in 1910, when the entire set of Delta counties had an average ratio of land-to-total-farm-value between 67% and 73%, by far the highest range in the state.

This uncommon statistical measure of land-as-percent-of-farm-value is revealing: as more of a farm’s value was owed to the value of land, instead of machinery,

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39 Increasingly, “chattel mortgages” entered the Delta financial markets, an example of which is found in the archives of the Poinsett County courthouse in Harrisburg, Arkansas. In 1940, a farmer, Cal Finchum, entered into a “chattel mortgage with power of sale” with the Portis Mercantile Company. Finchum received $225 to be repaid. In return, his list of collateralizable assets included “all crops to be produced by me, or under my control, during the year 1940 on approximately 17 acres of crops in Poinsett County, Arkansas”, nine different farm implements (including a “John Deere Stalk Cutter”, a “John Deere Turning Plow”, and a “Gee-Whiz”), and two mules (one 11-year-old named Blue and another mule to be purchased.) Not only was a chattel mortgage risky in an era of dynamic cotton prices, such data are also illustrative of patterns of asset acquisition: in a pre-mechanized farming world, both John Deere tools and mules are of essential value. Similar chattel mortgage instruments appear throughout the early 1940s.


41 While the fertile “Black Belt” counties in east Mississippi near the Alabama border possessed ratios in the low 60% range, all other counties measured in the 50%-59% range.
Figure 4.2: Percentage of all Mississippi farms under mortgage, by county, 1940. Note the concentration of high mortgage rates in northwest Mississippi’s “Delta” region.
implements, seed, draft animals, and so on, the principal method of a farm to raise capital would be selling land. While other farms could sell machinery for capital inflows, Delta farmers often faced the position of either selling land for capital but losing some geographic area of farm production, or keeping all their land while never gaining influxes of capital. This paradoxical choice undoubtedly led to the oversaturation of commercial banks in the Delta (an oversaturation that collapsed in the 1930s) and the eventual wave of foreclosures discussed earlier in this chapter.

Using archival land title records found in county courthouses, general patterns of financial institution land acquisition are possible for small-scale areas.42 One such sample area included examination of historic land records and transfers for the northeast Arkansas Delta-region county of Poinsett County, with documents located in the town of Harrisburg, the county seat. Primary data in annual mortgage deed transfer record books over a 42-year period, from 1929 to 1971, were tabulated. Any transfers or acquisitions involving the financial institution as “grantee” (the individual or corporation gaining title to the land) were recorded. The results are as follows: in 1929, financial institutions were involved as grantees in 112 transactions, falling to a low of 27 transactions by 1932. The period 1931-1938 saw a stable period ranging between 27 and 46 transactions. However, in the post-World War II period, from 1945 to 1960, transactions ranged from 101 to 185, and mostly steady rises during the 1960s culminated with 393 “grantee” transactions of Poinsett County land by financial institutions in 1971 (Figure 4.3).

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42 Using an analysis of sample deed transfer records from 1934 and 1935 located in the Crittenden County Courthouse in Marion, Arkansas, a transaction pattern is evident: an abundance of financial institution ‘grantee’ parties (those acquiring the land) exists, including “The Federal Land Bank of St. Louis”, “West Memphis Production Credit Association”, “Crittenden Agricultural Credit Corporation”, “Tri State Agricultural Credit Corporation”, and “Plantation Agriculture Credit Corporation”.
Increased financial involvement in the local land market is not a function of population growth or urban development. Poinsett County’s population changed little over the study period.\footnote{Poinsett County population ranged from 29,965 in 1930 to 26,843 in 1970, with a temporary peak of 39,311 in 1950} Similarly, the involved financial institutions were not limited to Poinsett County addresses. The “grantee” banks display a geography of their own, still a local-scale pattern but with banks radiating outward from Poinsett County into six total Arkansas Delta counties during this period (Figure 4.4).

A long-term effect of these combined changes suggests that a financial revolution of sorts occurs began during the 1930s, with an end result of a possible with a possible recapitalization of the Delta land market. The Depression led to foreclosures, abandonment, and direct purchases of farmland by local banks. These banks were later able to sell this farmland to buyers in new transactions during the 1930s, 1940s, and 1950s. From these new sales, local Delta and near-Delta banks received new capital, which enabled higher cash reserves for local banks, which enabled greater amounts of lending to residents during this period than before the Depression. Such capital influxes enabled increased purchases of mechanized farm equipment in subsequent years, which increased yields, which increased farm income, which increased Delta bank deposits, which allowed for more bank lending, and so on. In addition, mechanization aided a rural exodus of ex-farm labor towards non-cotton belt towns and cities. Future research can determine the degree of this hypothetical unintentional recapitalization of the Delta land market, via a series of positive financial feedback loops.

Two important points must be made to end this discussion of financial revolutions in the Delta South, particularly because bank acquisition of land during the 1930s should
Figure 4.3: Land parcel acquisition in Poinsett County, Arkansas by banks, 1929-1971, number of land parcels acquired per year.

Figure 4.4: Locations of banks acquiring parcels in Poinsett County, Arkansas (shaded) 1929-1971.
not be interpreted as unique to the Delta region.\textsuperscript{44} First, the percentage of increase of bank involvement in examined transactions and recorded data was very high in sample Delta counties. Second, if foreclosures-and-acquisitions are a universal property of 1930s agrarianism, then the fact that bank acquisitions are happening in the Delta is a signpost of “modernity”, a transition to Midwest-like rural landscapes in a region long known for its small average farm sizes, high tenancy rates, and degree of fragmentation.

The shock waves of 1930s banking and agriculture erased the Delta’s traditional farming financial patterns. The post-1930 Delta was increasingly unexceptional with respect to agriculture, as its inhabitants were subjected to the same financial pressures and actors in the rest of the United States, particularly in the “big government” 1930s and in the mechanized post-wartime 1940s. Even with starting point of a plantation-layer base in 1930, the typical Delta farm by 1970 was far more similar to a family farm in Nebraska than to an ex-plantation farm in Equatorial Guyana, Barbados, or Cameroon.\textsuperscript{45}

\textbf{4.3 State Intervention in Agriculture Through Depression and War}

An important element of economic development arose from state intervention in agriculture after 1930, particularly the massive increase in agricultural intervention by the federal government – intervention that the wider South had long resisted. Daniel summarized this tipping point of 1930, writing that “falling commodity prices in the 1920s, flood, drought, and finally economic depression not only appeared as divine signs

\footnotesize{\textsuperscript{44} Foreclosures and bank acquisitions were common in the Plains States during the 1930s.\textsuperscript{45} As defined by the quantitative metrics discussed in Chapter 2.}
but also broke stubborn Southern pride that had rejected aid. Hardship laid open the South for a federal invasion, and wave after wave of agency troops attacked...“46

The Great Depression brought with it massive layers of change to cotton production. Holley wrote that the survival of the cotton South in the Depression required government intervention, that meant “the structural transformation of the entire cotton economy.”47 In Chapter 2 and Chapter 3, the problem of cotton oversupply in the 1930s was addressed. Too many acres were producing too many bales of cotton, which lowered market prices per bale, which enticed farmers to plant cotton on even more acres the next year to earn a profit amidst falling cotton prices. During the Great Depression, the U.S. federal government instituted a variety of programs and enforced Congressional laws, eventually mandating that that planted cotton acreage be cut in half.48

Pre-Depression strands of government intervention had reached cotton agriculture, particularly outreach that attempted to stifle the spread of the boll weevil, especially during the period from 1900 to World War I.49 And efforts to intervene to restore cotton productivity existed in the Hoover years of the Depression. President Hoover’s Farm Board established a price floor for cotton. If the price for cotton fell below 20 cents per pound on the national market, the federal government pledged to buy the crop at that particular floor and would attempt to sell it in later years at a theoretically higher market price. However, this system of price guarantees led to overproduction, as other farmers planted cotton to receive the guaranteed payment of 20 cents per pound.

Conversely, the federal government faced storage expenses of the purchased cotton of over $500 million, which incentivized the selling of stored cotton for a loss on world markets during the early 1930s.\textsuperscript{50}

The general price floors of the 1930s U.S. cotton market combined with the carryover problem of oversupply led policymakers to consider drastic actions at the state government level. State governments sought to minimize the amount of cotton planted and therefore maximize cotton prices in the immediate future. In the early 1930s, Louisiana Governor Huey Long proposed a “Cotton Holiday” for 1932, meaning that no cotton would be grown at all in the United States during that calendar year.\textsuperscript{51}

There were varied levels of interest from other cotton states with respect to some sort of “holiday” plan. However, such proposals faced the economic difficulty faced by modern cartels. If the state-by-state ban was successful in lowering supply and driving up prices, any individual state would have a strong interest to re-legalize limitless cotton production within its borders. A solution was devised at a conference held in New Orleans to discuss this so-called “drop-a-crop” plan. Cotton-producing states reached a consensus that any annual cotton ban would not take effect until a combination of states accounting for at least 75% of the previous year’s crop agreed to the ban. Yet, because the governor and state legislature of Texas adamantly refused the plan (and, more importantly, because Texas accounted for more than 25% of the nation’s cotton crop) collective state agreements to ban cotton growing in 1932 were abandoned.\textsuperscript{52}


\textsuperscript{51} Holley (2000), p. 57. Only Arkansas and South Carolina were receptive to Long’s exact plan. As Texas, the leading cotton-producing state, opposed the measure, Long’s specific proposal was not adopted.

The failure of a single coordinated cotton production ban at state levels should not imply passive governments; states simply enacted their own measures of cotton acreage limits, generally favoring planted acreage reduction over total production bans. Texas enacted a law that forced a 30% reduction in planted acres in 1932 and 1933. Because of Texas’ preeminent production status, other states enacted the 30% reduction law, including Arkansas, Mississippi, and South Carolina, although the onerous requirements for the laws to take effect (similar to the 75%-of-producers requirement for any outright ban) meant that widespread acreage reduction did not cover the entire Delta or South.53

Sporadic acreage reductions by some but not all cotton states made little dent in global oversupply. By 1933, the “carryover” bales of stored cotton in reserve were more than the total annual global demand for cotton. Daniel noted that “it would have taken four years to reduce [1933] carryover to the 1929 level...”54 But farmers kept planting cotton, which further inflated supply, which further drove down cotton prices per bale, which created an incentive for farmers to plant even more cotton to reap some profit at a lower price per cotton bale. Too much cotton was grown each year, and an even greater amount existed in reserve. Haphazard voluntary reduction methods by a patchwork of states had not increased cotton prices during the first few years of the Depression, leading to a breaking point for cotton growers. Holley explained that by planting season of 1933, “the entire region was prepared at last to accept mandatory acreage controls.”55

Widespread voluntary acreage reduction efforts were successfully implemented by the Federal government, as a result of the passage of the Agricultural Adjustment Act. In May 1933, the new Agricultural Adjustment Administration (the AAA) was organized

as one of the major agrarian agencies of President Roosevelt’s New Deal, aiming to lower production (and therefore boost the price) of many major crops or livestock sectors across the United States. The AAA established a system of subsidies, as farmers were paid to plant a limited acreage of cotton each year, and farm prices were set at “parity”, fixing some prices to a farm’s purchasing power in 1910. For cotton farms, the AAA began a campaign to “plow-up” a portion of a farm’s cotton fields to reduce 25% of previous years’ average annual bale production. Simultaneously, farmers that followed the destruction orders would either receive direct payments per acre of destroyed cotton cropland or receive cash payments, including payments equivalent to the hypothetical cotton yield at 6 cents per pound.

Immediate cotton reduction efforts faced a special challenge: by May, the 1933 cotton planting season had already occurred. These proposals were initially controversial, since the AAA subsidy system required physical destruction of a newly-planted cotton crop. Yet, adoption was rapid. In 1933 alone, 10.5 million acres of cotton were plowed up, nearly 4 million bales of cotton were not produced that hypothetically would have been grown, and over $179 million in direct payments had been made to farmers. In the Delta states of Arkansas, Louisiana, and Mississippi, nearly a million bales of cotton were “saved” by not being produced as 2.3 million acres

57 Perkins (1969) and Holley (2000) give a more detailed examination of AAA methods and procedures.
58 The controversy is mentioned in detail by Holley (2000), p. 59: “The concept of more from less flew in the face of common sense; people were ‘ill-housed, ill-clothed, and ill-fed,’ yet the government was destroying supplies of basic commodities, including food.” Holley further noted the particular non-intuitive challenges of physically destroying a cotton crop: “Mules were forced to walk on the cotton plants they had been trained not to trample.”
59 Holley (2000), p. 59
of cotton were plowed-up and $44 million in direct payments were made.\textsuperscript{60} Because cotton prices doubled from 5.5 cents per pound before the AAA to over 10 cents per pound by fall 1933, Delta cotton producers supported future reduction efforts by the AAA. Yet, overall bale production was still high, nearly 90% the average annual bale output of 1928-1932, so carryover bales and “oversupply” continued in the 1930s.\textsuperscript{61}

The AAA had immense power in shaping the landscape of Delta agriculture due to its seemingly unlimited source of payments and its support from farmers and Washington, D.C alike.\textsuperscript{62} Even as the Supreme Court invalidated much of the Agricultural Adjustment Act of 1933 as unconstitutional due to the method of payment and regulation, these shortcomings were addressed in a replacement Agricultural Adjustment Act of 1938.\textsuperscript{63}

A particular challenge of the AAA in the cotton Delta arose from the tenant farming system. According to contract law, direct payments went to the legal landowner of particular cotton fields, not the renting tenant farmers. Only the landowner could sign the contract to be enrolled in the AAA program, so the landowner would be given all subsidy monies first. The AAA stipulated that each landowner was legally required to disperse payment funds to tenant farmers who worked any field that was “plowed-up” in accordance with the “share” ratios of each tenant farmer (usually 1 to 1 or 3 to 1), but in

\textsuperscript{60} Figures from Payments Made under the Agricultural Adjustment Program, 74th Congress, 2nd session, Senate Document 274, 1936, p. 26, 28. A worthy treatment of similar plow-up results appears in Holley (2000), pp. 60-61.

\textsuperscript{61} Holley (2000), p. 61.

\textsuperscript{62} The power of the AAA was seen in many ways. For example, in 1940, a special cotton report was conducted by the U.S. Census, using data from the 1940 census of agriculture. The cotton report is noteworthy because of its motivation: its introduction explains, “This tabulation was made at the urgent request of various agencies including the Agricultural Adjustment Administration and Farm Security Administration, and the major costs were borne by them. The information was necessary to meet Congressional inquiries and to help solve many social, economic, and administrative problems.” \textit{1940 United States Census of Agriculture: Special Cotton Report} (1940), p. xi.

practice, a fair and complete dispersal of funds rarely happened. Delta tenant farmers, many of which had already suffered through flooding, drought, and low prices, were now being ordered to destroy their crops without receiving appropriate financial compensation. Simply put, tenant farmers were not paid as much as they should have been paid, and tenant farmers had little political power to seek justice.

The entire cotton tenant farming system declined for many reasons, some of which were discussed in Chapter 3. Additional studies claimed the start of tenant farmer decline in the early years of the Great Depression, before federal intervention (1930-1932). However, it can be easily argued that the AAA had more influence on the decline of tenancy than any other individual institution. Because of the AAA’s program of reducing cotton acreage and reducing cotton yield, there was less labor needed to work the shrinking cotton fields. Landowners simply refused to continue the financial arrangements with tenant farmers in the years after 1933, and by 1935, a slight five-year decline in cotton farm tenancy was recorded for the first time in the twentieth century.

Woodruff also argued the downstream effects of the AAA, that the legislation presented “an actual organized challenge to planter authority in the Delta.” In addition, because profits rose due to price increases and Federal subsidies, the newly wealthy cotton landowners were in a better economic position to experiment with new agricultural technology. The AAA-enriched planters invested in mechanization earlier than other Delta farmers, and mechanization itself hastened the decline of tenancy and hand-picked

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66 It should be noted that in 1935, not 1930, the total number of sharecroppers peaked, as was discussed earlier in this dissertation. However, as new owner-operated farms came into existence between 1930 and 1935 at a faster pace than new sharecroppers, the absolute rate of tenant farmers declined as a relative percentage from 1930 to 1935, falling from 55.5% to 53.3%. See Holley (2000), p. 61 and data from Farm Tenancy: Report of the President’s Committee. Washington, D.C.: GPO, 1937, pp. 96-99.
Daniel argues massive changes of the cotton economy as the culmination of a “series of changes” including previous waves of governmental intervention dating from the boll weevil infestation of the 1910s and 1920s, financial relief, and early mechanization efforts, all of which seemed to come together during the Great Depression. Specifically, Daniel noted that the Depression itself “undermined the tenure system and the tenuous credit system that fueled it”: after all, the Depression brought federal relief payments and AAA-enacted subsidy payments, which planters later used to invest in tractors and, after the 1940s, mechanical cotton pickers.

There were other problems with the AAA, including the sheer complexity of individual farmer contracts, payments, and records. Eventually, efficiency reached the AAA, but initially, the over 1 million individual farm contracts validated by the AAA in 1933 (including over 270,000 contracts in the Delta) were very difficult to monitor. While many planters withheld payment from tenant farmers, in other situations the financial arrangements were too complicated for honest local landowners to follow, given the contract coordination required with Washington, D.C.

Other farmers plowed up only the worst acreage they owned that would not have produced much cotton anyway, leading to consistently high cotton production in many regions, even as the AAA paid out funds for compliance. Additional farmers watched their neighbors plow up acre after acre, never intending to plow up their own cotton fields, instead hoping to gain additional income from planting their own cotton fields to capacity while the price per bale was rising from every other farmer’s acreage reduction. Woodruff noted that “the AAA made it advantageous for landowners to simply plow

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under all of their sharecroppers’ land, using the full subsidy payments to hire them back as wage workers at low costs.” In other regions of the Delta, many farmers simply “cheated”, and received payments for fields that were still harvested. The noble experiment of a command economy designed to rescue a financially-imbalanced agriculture was limited by the realities of farmers’ basic economic incentives for profit and the near-impossible levels of necessary enforcement required.

The failure to provide tenant farmers with their deserved payments led to moments of important worker resistance. Labor power in the Delta had always rested in the hands of the elite planters, and legally landless tenant farmers occupied the lowest rungs of the “agricultural ladder.” However, in the depths of the Depression, with potential cultivatable fields unplowed and a great deal of relief monies withheld, some Delta tenant farmers attempted to organize. In 1934, the Southern Tenant Farmers Union (STFU) was organized in northeast Arkansas in the town of Tyronza. The union fought for their fair share of federal relief, and campaigned against unfair evictions.

What was noteworthy about the STFU was the integrated makeup of all levels of the union. The Depression had economically shocked the Delta to such a degree that, for many tenant farmers, centuries-old barriers of race were less important than earning a daily wage. Other reactions to changes in tenant farming were rooted in a different way of organizing farming. Two farms in the cotton core of the Mississippi, the Delta Cooperative Farm (founded in 1936) and the Providence Cooperative Farm (founded in 1939), were established by the missionary evangelist Sherwood Eddy in an attempt to create a landscape of collectivized agriculture with fairer economic policies. The farms

70 Woodruff (2003), p. 158.
featured an integrated labor pool with decisions made by a panel of trustees, but after the 1940s, declining profits and the unpopularity of the cooperative farms’ politics led to each farm being divided and sold to individual landowners in the mid-1950s.73

The crisis of the Depression had lasting effects in the Delta, but the actions of the governmental interventions of the AAA in particular helped to reshape the cotton landscape. For the landowners, the AAA was beneficial: federal acreage reductions made tenant farming less necessary, and Federal support payments incentivized investment in mechanization. The AAA was not at all wholly responsible for changes in the cotton Delta, nor was it the only instance of Federal intervention in the cotton South during the 1930s. Several other agrarian-focus planks of governmental action occurred throughout the South as part of a broader set of New Deal policies.74 However, the system of payments to cotton farmers in the worst time of the Depression absolutely halted the conventional production mindset to produce as much cotton as possible at all times.

In the 1940s, the greater driver of state-associated “development” attempts were industrial in nature, related to World War II; these attempts will be discussed in the next section. However, state intervention in agriculture did not cease to exist after 1945. Extensive governmental regulation of cotton agriculture continued, as the foundations of the AAA expanded into specific requirements of planted acreage, yields, and so forth. By the 1950s, the Federal government still possessed immense power over particular acreage “allotments”, and these allotment limits were strictly enforced with financial penalties for non-compliance. An Arizona cotton farmer in 1957 grew an “extra” 4,600

acres of cotton beyond the government-mandated allotment limit. Although the sale price was nearly double the cost of production, the farmer incurred an allotment penalty of nearly one million dollars, and barely broke even on the enormous crop.\footnote{Hart (2003), p. 57.}

State involvement was not limited to acreage caps for cotton planting. In some instances, governmental investment spurred the expansion of cotton production, particularly in western states after World War II. Local farmers in California successfully lobbied for the construction of the massive California Aqueduct irrigation canal in the 1950s and early 1960s. When the canal was completed in the late 1960s, it irrigated part of the San Joaquin Valley with water from Northern California, enabling a wider range of possible cotton cultivation within California.\footnote{The Central Valley-linking portion was built in the 1960s, although additional spurs of the aqueduct, including a statewide coastal route, were not completed until 1997. Hart (2003), p. 58.} State involvement was increasing possible acres of cotton fields in the Western states.

A final word must be said of the direct non-planting payments that began with the AAA in the 1930s, better known by the “subsidy” label in the modern era. (Although the AAA encompassed more payments, including relief monies, cash payments, a promised price for hypothetical cotton, and so forth, a portion of the AAA funds could be accurately described as the counterpart to the modern “subsidy”.) Subsidies paid to cotton farmers did not end with the worst years of the Great Depression. From 1934 to 1936, $107 million of direct subsidies were paid to cotton growers, with an additional $122 million paid in 1938 and 1939. However, these Depression-era subsidies were dwarfed by payments paid to cotton producers in the 1960s and beyond. Over $4.2 billion in direct payments from the U.S. Federal government were made to cotton farmers from 1966 to 1970, with over $900 million paid in subsidies in 1967 and 1970 in
These high amounts of subsidy payments continued after 1970 to the present. After the late 1960s and its era of activist Federal intervention in agriculture, nearly billion-dollar annual subsidy payments (as a total of funds paid to all cotton growers each year) were the rule, not the exception. This structural shift in the cotton economy to one largely “supported” by government funds represents another benchmark of changing agriculture reached in Delta cotton production around 1970.\(^78\)

Payment systems common by 1970 continue to the present, with some small modifications. Contemporary cotton agriculture is supported by government programs of “base” cotton farming, where the Federal government pays cotton farmers a particular price based on the average acreage of cotton grown by that farmer the previous three years (this program also protects new cotton farmers against price uncertainty during the first three years of cotton production.)\(^79\) U.S. subsidies to cotton producers continued their rise in the decades after 1970.\(^80\) The effects of subsidy payments to cotton farmers hastened the end of tenancy. With regular subsidy payments, individual farmers carried less financial risk tied to any year’s crop. Similarly, farmers had more funds to experiment with more mechanization, which required fewer tenant farmer laborers in the fields. The wave of government intervention in cotton agriculture that began with the AAA helped to eliminate Delta tenancy forever, and aided the transition of cotton agriculture to a mechanized, government-supported endeavor.


\(^{78}\) For comparative purposes beyond the temporal scope of this dissertation, U.S. cotton subsidies measured nearly $4 billion in 2005, second only to the over $7 billion in annual corn subsidies.

\(^{79}\) Hart (2003), p. 246.

\(^{80}\) Baffes (2005), p. 265. In 1995, the United States government awarded a combined $217 million in subsidies; by 2002, that figure had risen to $2.6 billion in payments. The combined forms of government assistance included “coupled payments”, insurance, direct payments, “production flexibility contracts”, other payments, loan assistance, and other forms.
4.4 Attempts at Industry in and Beyond the Cotton Core

Of additional importance for the Delta’s mid-century changes were the economic development attempts that occurred within the historic cotton core. Often supported by state or federal governmental directives, these industrialization “attempts” typically involved fewer workers and a smaller geographical footprint than contemporary factories in the Midwest or Northeast, and were largely unsuccessful. Private industry at times backed various agribusiness development ventures, including large-scale cotton gins or cottonseed oil factory sites. Most all of the successful industrial development in Delta states during this time occurred beyond the cotton core, as those locations were devoid of the structural inefficiencies and comparative disadvantages of production discussed in Chapter 2. In essence, this chapter also argues that the economic decline of the Delta by 1970 was also related to decades of economic and industrial growth located seemingly everywhere in Delta states except the cotton Delta regions, causing a gradual transfer of economic power from the old cotton core to the one-time hinterlands.

To begin, some “industry” was merely an extension of cotton and its byproducts. Industrial development in some regions merely meant the growth or expansion of independent cotton ginning companies. In the antebellum era, virtually all cotton gins were run by the planter on the plantation. However, in the twentieth century, cotton gins run as businesses that were entirely independent from plantation gins ultimately became more successful. By 1938, only one “plantation gin” existed in the state of Tennessee. Meanwhile, the total number of gins declined as part of larger consolidation trends in agribusiness. Tennessee had 833 cotton gins in 1902, 297 gins in 1958, and 45 gins in 1997. While the gins were often a large employer within a town, they never provided
employment on a mass scale: in the above example of 45 gins remaining Tennessee in 1997, calculations of total workers equal about 33 workers per gin.\textsuperscript{81} Non-cotton agriculture was attempted as well, including poultry and vineyard industries, although these were located firmly beyond the Delta into the Ozark Mountain region.\textsuperscript{82}

One increase in agribusiness industry within the Delta were ancillary industries of cotton, including cottonseed oil factories. While these factories spread throughout the South (particularly Georgia), many important locations of cottonseed oil factories flourished in the city of Memphis, as well as in the northwest Mississippi regions close to the Mississippi River. Other cotton-related industries including cottonseed-oil-using Crisco-making factories, and companies producing agricultural fertilizers were also profitable ventures during the early twentieth century. Successful industrialization long-term in the Delta cotton core was rare. In some ways, still-profitable cotton production prevented possible industrialization: simply put, a factory would almost never be built on a cotton field. The overall climate for industrial growth in the early twentieth-century Delta was weak, with exceptional declines in manufacturing by 1930 (Figure 4.5).\textsuperscript{83}

Some “cotton core” towns developed light manufacturing, but eventually those factories came and went.\textsuperscript{84} Marked Tree, Arkansas, found temporary success with

\begin{footnotesize}
\begin{itemize}
  \item Hewes (1953), pp. 126-140; 1948 Agricultural Statistics, p. 47.
  \item Although the total number of manufacturing establishments in the United States had been declining in the early twentieth century, these declines could mean a company’s failure as well as a successful sale or acquisition. However, during the 1930s, while the total number of manufacturing establishments in the country declined by just 4.5% on average, the Delta states of Mississippi and Arkansas declined by 32.3\% and 31.9\% loss, respectively. Mississippi’s manufacturing establishments declined from 2,455 locations in 1920 to 1,911 in 1930 to 1,294 in 1940, while Arkansas’s manufacturing establishments declined from 3,123 locations in 1920 to 1,731 in 1930 to 1,178 in 1940. 1940 Census of Agriculture.
  \item The town of Leachville in Northeast Arkansas, centered on lumber production since the building of a sawmill in 1898, dubbed itself as the place... “Where Agriculture and Industry Meet.” A shoe factory that opened in the 1950s closed in the 1980s, severely damaging the town’s economy.
\end{itemize}
\end{footnotesize}
Figure 4.5: Manufacturing establishments in Delta states, 1920-1940. U.S. Census figures.

Lumber mills in the early twentieth century. The town of Durant in central Mississippi saw the construction of the Real Silk Hosiery Mill in 1936, only to have the plant close in the 1950s. In rare instances, a cotton belt city could sustain industry for many decades, but eventually even those successes proved ephemeral. Mohawk Rubber employed hundreds in Helena, Arkansas, but it finally closed its plant in 1978.

The story of International Harvester’s Memphis site is particularly illuminating of the difficulty with sustained in-Delta industrial production. The company bought 260 acres of land north of Memphis in 1942, and opened an enormous manufacturing

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Whayne (1996) found over 50% of workers were employed at timber mills, with over 25% employed as timber mill day labor, and less than 5% working as agricultural wage labor. “Table 2.1. Occupations of adult men in Marked Tree, Arkansas, 1900 – 1920” p. 33; source from 1910 & 1910 U.S. Census.
complex in 1948, producing mechanized farm equipment (including mechanical cotton pickers). The “Memphis Works” site employed 2,000 workers as industrial functions relocated from Chicago to Tennessee. Although the factory did well during the cotton picker adoption waves of the 1950s and 1960s, after 1970, demand slowed, and labor and management conflicts increased. A series of strikes and mass layoffs occurred from 1979 to 1982, with the factory permanently shutting down in 1983.86

Industrial desires by local leaders were obvious: in theory, as a particular industrial site succeeded, more workers (and thus more residents) would fill the town, followed by more commercial services to match the increasing demand. But cotton belt manufacturing usually had too few backers with too little influence.87 In the early 1950s, Harold Ohlendorf, an Arkansas cotton farmer, realized the importance of industry after seeing an International Harvester mechanical cotton picker perform successfully on his farm.88 Ohlendorf developed a local industrial commission within the northeast Arkansas town of Osceola, but efforts for industrial coordination at wider scales were limited. As a result, industrial location was firmly beyond the cotton core. Delta Industries, makers of Ready-Mix concrete, was founded in Jackson, Mississippi in 1945, and has expanded to 30 locations in Mississippi alone, yet no locations exist in the Delta north of Yazoo City.

That the Delta core largely failed to industrialize must be compared to early twentieth-century industrialization in the wider industrial South. A core point of other Southern industrialization was a sort of localism, including a worker connection to the fields: a study of 35 cotton mill workers working in Newberry County, South Carolina

87 Ralph Gray (1963) created an economic plan for Arkansas in incorporating timber, leather, aluminum, rubber, and general manufacturing. See “The Arkansas Public Economy and Economic Development.”
88 Rutherford (2012).
before 1900 found that 30 persons had rented or sharecropped a farm immediately before coming to work at the mill. Additionally, all 35 persons had come from Newberry County or contiguous bordering counties. And industry came to the wider South for other reasons: a textile mill owned by the Vanity Fair company opened in Monroeville, Alabama in 1937 and was still in operation in 2000, yet this location was a direct result of the company leaving 1930s union agitation in Reading, Pennsylvania. The South gained other industry from its “right to work” non-union atmosphere. Cotton mills developed throughout the North Carolina Piedmont region, keeping their non-union strength even in the aftermath of a series of (ultimately unsuccessful) violent labor strikes in 1929.

The broadest waves of industrial attempts in Delta states involved government intervention. An example of state involvement in industry was Mississippi’s “Balance Agriculture With Industry” program in the 1930s. Designed to diversify the state’s economy beyond agrarianism, the “Balance Agriculture With Industry” program saw state-governmental control of some industrial aspects, as light manufacturing (in particular, textile mills) was planned across Mississippi (Figure 4.6). State governments established local agencies to usher in development: the Mississippi Agricultural and Industrial Board was created by state law in 1944, and the Arkansas Industrial Development Commission was created in 1955. And at times even the Federal government’s intervention was “local”, headed by those who knew the Delta best: Mississippi State University graduate Cully Alton Cobb became the head of the Cotton Division of the Agricultural Adjustment Administration during the New Deal, after an unsuccessful “candidacy” for the position of Secretary of Agriculture in 1932.

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89 Graves (1947), p. 48. Newberry County is on the border of “Upstate” and “Midlands” South Carolina.  
90 The Balance Agriculture With Industry program (described as a “financing program”) appeared in city booster materials as least as late as 1960. See Clarkdale City Directory 1960, p. 15.
INDUSTRIAL SUBSIDY LOCATIONS IN MISSISSIPPI
UNDER THE BAWI PROGRAM

Figure 4.6: Balance Agriculture with Industry promotional map of proposed sites.
Figure 4.7: Locations of Mississippi industrial development or factories highlighted in Mississippi Magic industrial review brochure, publication date circa 1961-1964. The physiographic Yazoo Delta region is shaded in green. Note the general absence of in-Delta industry.
The Mississippi Agricultural & Industrial Board also produced supportive reports and brochures by the 1960s, such as Mississippi Magic, which highlighted in-state production. A booster-friendly article, “Mississippi to the Moon”, focused on portions of NASA’s Saturn V Rocket, which would be tested in Mississippi. After mapping the industrial locations identified in the newsletter, a familiar pattern of manufacturing in Delta states is apparent: virtually no sites are named within the Delta, while the rest of the state had a wide variety of factories and new production sites (Figure 4.7).

The Great Depression saw a wave of state government tax-related activism in the South, enacting general statewide income levies for the first time. According to documents from the Tax Foundation, most Southern state governments passed legislation mandating state taxes on income around 1930, including Alabama in 1933, Arkansas in 1929, Georgia in 1929, Louisiana in 1934, and Tennessee in 1931 (Mississippi passed a general state income tax much earlier, in 1912). All of these states except for Tennessee also enacted taxes on corporate income during the same year. Delta state governments were also parties in local land transfers and acquisitions.

The economic crisis of the 1930s also brought about Federal industrial activism related to the New Deal. But the largest monetary influx of Federal industrial intervention in Delta economies came during World War II. From July 1940 to July 1944, over $2.8 billion was expended on “federal financed manufacturing facilities” in

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92 Tennessee income tax was and is “limited”, covering only interest and dividends. Tennessee enacted corporate taxes in 1923, eight years before its personal income taxation began.


94 For example, using primary data from the archives of the Poinsett County Courthouse in Harrisburg, Arkansas, 39 land transfers to the government of the United States of America (where the government is the “grantee”) occurred within Poinsett County in 1943 alone, all taking effect on January 1, 1943.
the South. In the same period, just under $15 billion was granted in war contracts to Southern states. And yet, the Delta states again received less: Mississippi’s $46 million in “federal financed manufacturing facilities” was the lowest in the South; Arkansas’ $130 million in “war contracts” were the fewest contract dollars in the South. This inter-South disparity between the Delta and the rest of the South was known by local leaders. A Mississippi Agricultural and Industrial Board pamphlet lamented, “...Mississippi has gotten the CRUMBS from war industry while the LOAVES have gone to other Southern states. The main reason for this condition was that Mississippi did not have industrial facilities available at the beginning of the war.”

The impetus for desiring defense plant location during (and after) the war was simple: more factories would bring more jobs, which employed more citizens who paid more taxes and bought more local products. Defense industry location in particular often appeared in clusters by the second half of the twentieth century, creating what Ann Markusen called a “gunbelt”. Markusen’s answer of how Federal government defense industry locations are determined is esoteric and nonformulaic. In reality, political power of Congressional leaders with seniority played as much of a role as any other factor, and in this case, again, much of the Delta was disadvantaged. In 1940, five out of the six Congressmen from Arkansas were serving their first term. Smith tells the story of an Arkansas Congressman that criticized the repeated passing over of Arkansas for defense contracts, until he was met with a rejoinder from Pennsylvania Congressman John McDowell, who accused the Arkansan of attempting to “tear down our factories,
throw out of work our workingmen, close up our mines and our mills, and remove them to the wild hills of the Ozarks where the business and prosperity will rebound to the everlasting glory of the Ozark hillbillies.”

Schulman identified government involvement in funding for defense industry, general manufacturing, and social welfare programs as valid inputs for Southern economic development, yet still subject to the whims of the region’s powerful, entrenched political presence in Washington, D.C.

In World War II, defense location was typically beyond the cotton belt (Figure 4.8). A listing of individual defense industries established in Arkansas in the 1940s reads as a list of non-cotton towns: Jacksonville, Hot Springs, Malvern, Texarkana, Camden, and El Dorado. Some defense locations were in the cotton core, such as the Pine Bluff (Arkansas) arsenal and incendiary bomb plant, but these instances were rare. Most of these wartime plants were in Louisiana or Arkansas, which slowly created a new urban system that became important to other growth-related feedbacks. Relocation camps of Japanese citizens or prisoner of war camps came to the near-Delta region, but these sites were temporary. And industry that located along the Gulf Coast region did so largely during World War II, enabling a wave of large-scale industrialization of the coastal South in the 1940s. After 1970, a non-cotton Delta “gunbelt” survived.

99 Schulman (1991), p. ix. Schulman argues that Southern economic prosperity is linked to 1940s and 1950s Federal investment, in that Keynesian fiscal policy and government regulatory measures on commerce combined to create the South’s current economic climate, particularly through postwar politicians fostering economic growth by securing Federal dollars. This argument of political elites’ super-agency ignores the revolutionary changes of mechanization and rural-to-urban shifts that impacted urbanization and economy.
100 Some cotton towns actually rejected Federal industry or defense locations: in the 1940s, England, Arkansas rejected a plan to have an Air Force Base built in that town.
103 Camgian Microsystems, a small company headquartered in Starkville, Mississippi, received over 12 million in dollars in U.S. military contracts for production of ground sensors to be used in Afghanistan.
Figure 4.8: A non-cotton “Gunbelt.” 1940s-era military wartime sites in the western Delta Region of Arkansas and Louisiana, contrasted to the historic Cotton Belt (shaded in green). Sites include POW camps, Japanese internment camps, airfields, Army Forts, training camps, and defense plants.
One other major branch of attempted industry in Delta states (but in the non-cotton regions) was the development of extractive industries and natural resource exploitation. Newby discussed the possibility of non-farm jobs in the South, writing: “The environment shaped the alternatives to farming, largely limited to extracting and processing the products of earth, forest, and farm. These jobs were unskilled, low paying, generally backbreaking, and often in out-of-the-way places that necessitated work camps or company towns and the socioeconomic relationships peculiar to such places.”

Often these extractive industries were temporary, and were limited by geography (mining concerns, for example, were sited on the margins of the Appalachians and the Ozarks.). Oil production increased in southern Arkansas and east Texas as part of a larger oil boom. Union County, Arkansas, home to the city of El Dorado and ground zero for the 1920s oil boom, saw its population increase from 29,961 in 1920 to 55,800 in 1930.

Timber extraction and the lumber industry developed major footholds in northern Louisiana and southern Arkansas. Fisher, Louisiana, existed as a hybrid company sawmill town, and yet Fisher is located in Sabine Parish in western Louisiana near the Texas border, in a world that is distinctly non-Delta in every way except the state taxing authority. Bogalusa, Louisiana, by contrast, is at the eastern border of Mississippi, near the Gulf Coast and New Orleans. Bogalusa was a year-round lumber venture (with year-round class frictions culminating in a massive 1919 strike) until the sawmill closed in 1938.

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104 Newby (1989), p. 8
105 See Benhart (2007) Appalachian Aspirations; Steel, A. A. Coal Mining In Arkansas (1910).
106 In the modern era, timber and lumber industries persist in northern Louisiana and southern Arkansas, where Deltic Timber manages about 700 square miles of forest land.
Coal had a strong presence in the foothills of the Ozark and Ouachita Mountains, again decidedly non-Delta regions, only sharing the name of the state of Arkansas with cotton plantations in the state’s east. Records and maps from that era suggest that various coal mines in western Arkansas had large sizes and decades of active business; but they, too, were transitory companies in the long run.\(^\text{107}\) Bauxite, Arkansas, was a company town beyond the Delta for workers who extracted the aluminum ore of bauxite from underground mines. Segregated by nativity, the company town established cultural “neighborhoods”, including “Italy Camp”, “Africa Camp”, and “Mexico Camp”. While the town and industry were part of an early regional corporate system, lowering costs of foreign production sites led to the closing of the company town’s operations in 1969.

These extractive industries, while temporarily successful, were not necessarily primed for income accumulation in local economies, as outside interests were often the owners. One of these outside interests visited the timber lands near Fisher, Louisiana near the turn of the twentieth century and remarked that locals were “hostile to northerners, hostile to corporations and distinctly unfriendly to anything that might disturb their way of life.”\(^\text{108}\) The Missouri Lumber and Mining Company, headquartered in Kansas City, owned several subsidiary lumber companies in Louisiana.\(^\text{109}\) Yet even these ventures must be identified as “temporarily” successful: virtually all of the Missouri Lumber and Mining Company’s Louisiana mills were permanently closed by 1953.

This chapter examined the poor economic situation of the cotton core, a complicated system of Delta finance, state intervention in cotton agriculture, and various

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\(^\text{107}\) Central Coal and Coke near Huntington Arkansas, had mine extents about 2500 feet by 2500 feet, 1942 map. Hoing Coal Company in Coal Hill, Arkansas, had extents of about 4000 feet by 4000 feet in 1923.

\(^\text{108}\) Sabine Parish Library, “Fisher, Louisiana”. The visit dates from 1899.

\(^\text{109}\) Including the Louisiana Central Lumber Company, the Louisiana Long Leaf Lumber Company, the Forest Lumber Company, and the Louisiana Sawmill Company.
attempts to reach economic advancement through industry, often backed by government agencies. These factors combined to slow any economic growth in-Delta while the non-cotton regions of Delta states experienced an uptick in incomes, human development, and financial power. In some ways, the direct influence of Federal intervention in cotton agriculture finance and Federal industrial location during the Great Depression and World War II played an enormous role in the economic situation of Delta states by 1970.

In other ways, wider economic development beyond the cotton belt in the Delta was not purely a reaction to a declining hand-picked cotton industry. Instead, the non-cotton Delta region’s development can be seen as part of a larger national wave of what Mosher called “industrial restructuring.”

In retrospect, the failure of “development” (primarily widespread industrialization attempts) within the Delta cotton core ought to have been anticipated, given the clear regional inefficiencies in transportation and natural resource potential, as well as the comparative disadvantages of Delta production that led to cotton’s decline. In many ways, the Delta South had missed its chance: by the time the Delta turned to industry, other American regions were long-established centers of national manufacturing, and locations overseas offered cheaper production costs in an increasingly globalized world. In short, there was no good reason to place a factory in the Mississippi Delta in 1970.

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110 Mosher (1995) identified the sweeping changes in the iron and steel industry in western Pennsylvania that precipitated micropolitan layers of growth. This “restructuring” occurred simultaneously with reorganization of businesses, advancements in new technologies, and changes in the workforce, p. 84-87. Bradbury (1989) preceded Mosher with a general model of industrial restructuring through a geographic lens, which includes declining capital, bottlenecks in productive ability, limits of technology and wider economic conditions, and labor unrest. Many of these problems are exhibited in/near the Delta of 1930, and are examined in detail earlier in this chapter.
Chapter 5: Urbanization and Migration in a Rural Landscape

In the Mississippi Delta region, a series of repeated and widespread economic shocks around 1930 affected changes to the Delta cotton economy. As hardship and change from Depression and war readjusted systems of cotton production, more efficient production occurred in western U.S. states, and later in global locations, especially in South Asia and East Asia. By 1970, the Delta was increasingly mechanized and devoid of tenant farmers. These structural changes, discussed in Chapter 2 and Chapter 3, influenced the lack of long-term “development” within the cotton Delta discussed in Chapter 4. However, a major component of the changing Delta landscape has yet to be explored: between 1930 and 1970, the vast majority of urban places and rural townships in the Delta declined in population. Particularly in the 1940s and 1950s, a massive rural exodus occurred, as former cotton farm workers simply left the Delta altogether.

Deeper investigations of census counts reveal migration patterns tied to the cotton economy. This exodus, resulting from both “push” and “pull” factors, decreased local tax bases and lowered economic demand for area retail and services. In total, over 2.6 million Delta residents out-migrated to cities in Delta states (and beyond), and local rural populations severely declined. A shedding of excess farmer and farm-worker populations occurred by 1970, which leaned up agribusiness efficiency, but these losses devastated cotton-region towns in the Delta. However, population decline did not happen in an instant; neither natural disaster nor wartime calamity had ushered in this exodus. Tenant farmers and farm workers, who in 1930 were crowded onto small land parcels and faced economic instability, simply moved away.
Of emphasis is that the 1920 or 1930 populations of areal units in the Delta were typically the highest population ever reached by those towns or townships. Therefore, 1930 generally represented a dense rural agrarianism in the Delta, compared to sparser rural population densities sometimes seen in farming townships in Iowa or Nebraska. By 1970, the dense rural settlement patterns had leaned up as the decreased labor required for cotton production (as well as the decline of tenancy) pushed cotton workers out of the rural Delta. The spatial arrangements of Delta farms changed profoundly during this depopulation period from 1930 to 1970. Increases in industrial presence and the declining importance of cotton “gin towns” coincided with the decline of cotton plantations and so this chapter also examines the urban morphologies of Delta towns. A hallmark of these agrarian transformations was a thinning out of overpopulated rural farms, as agricultural jobs and farming opportunities in the Delta disappeared, which impacted the size and function of urban settlements as well.

5.1 Population Dynamics and a Great Rural Exodus

Eugene Pitts, a black farmer living near the Ferda Plantation, appears in historical documents as the parent of a schoolchild at the all-black Rosenwald school in 1930. Ferda was near the Tucker Plantation, and both were in Jefferson County, Arkansas. By the 1940 Census, however, Eugene Pitts was recorded as a citizen of Helena, Arkansas. Pitts, like many millions of Delta residents, had left the farm and moved to the city.

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1 The cotton-focused and rural Old River Township in Jefferson County, Arkansas had a peak population density that was denser than 80 of Iowa’s 99 counties in 1900.
2 See Alexander (1943) for the transitions associated with agricultural life in a post-plantation world.
3 Data include historical maps, historical aerial imagery (where available), and historical city directories (including Dun & Bradstreet credit books, Polk City Directories, and Sanborn Fire Insurance maps.)
A rural exodus occurred within the Delta from 1930 to 1970, especially during the late 1940s and early 1950s, as about 2.6 million rural residents left the farm and migrated to existing cities within Delta states, or left the Delta states completely seeking better employment (Figure 5.1). These migrations, both in- and out-of-state, had major effects on the region’s economic health. By 1970, population distributions in the former periphery regions were conducive to the modern service economies of contemporary American urban areas. In essence, a leaning-up of the local rural populations had occurred, changing the ex-plantation Delta’s population concentrations.

The total population trend in the Delta during the exodus represented a “U”-shape curve: comparing the 1930 census and the 1970 census, Arkansas and Mississippi gained a combined 275,000 residents through natural increase and immigration. Yet in between 1930 and 1970, massive outmigration losses occurred, and the 1960 census for Arkansas and Mississippi was 168,000 people less than the 1940 census. These statewide figures incorporate both cotton realms and non-cotton lands, so any intercensal population loss is noteworthy, given the general population increases of Southern states in the “Sunbelt” after World War II. Between 1930 and 1970, 109 Arkansas and Mississippi counties (out of a possible 157 counties) lost population equivalent to 560,000 residents.

The depopulation phenomenon was largely a rural loss: of the 18 counties in Arkansas and Mississippi bordering the Mississippi River, the only counties that gained any population from 1930 to 1970 were “urban” – the counties containing suburban Memphis, Greenville, Vicksburg, and Natchez. However, the total number of actual

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5 Historical aggregate data by political geographic division, race, and gender for Delta states are available through the Mississippi State Data Center (at the University of Mississippi), the Arkansas Census State Data Center (at the University of Arkansas at Little Rock), and the Louisiana State Census Data Center (a division of the Louisiana State Government in Baton Rouge.)
outmigration was much higher, as natural increase from birthrates would presumably boost population counts and undercount fleeing migrants. Holley estimated a “net outmigration” — incoming immigrants minus outbound emigrants — for each intercensal period using the “survival rate method” of accounting for natural increase. This method calculated a total outmigration of over 2.6 million Delta residents from Arkansas, Mississippi, and Louisiana from 1930 to 1970 (Figure 5.2).

These outmigrations had particular demographic trends: Louisiana actually gained white migrants during this 40-year period, but lost over 400,000 black migrants. Mississippi lost nearly a quarter-million white migrants and lost nearly a million black migrants. The majority of Arkansas outmigrants were white, by a measure of about 600,000 to 450,000. And these population changes should be couched by time. The majority of the total 2.6 million migratory moves occurred between 1940 and 1959.

The result was a rapid shift of an enormous part of the Delta populace: Mississippi lost 20% of its 1940 population during the 1940s, and another 20% during the 1950s. Arkansas lost 21% of its 1940 population during the 1940s, and another 23% during the 1950s (Figure 5.3). In Mississippi, the population divergence is staggering: 38 of Mississippi’s 82 counties reached a peak population at or before 1940 (30 reached a maximum in 2010). From 1930 to 1970, the results are even clearer: 62 of Mississippi’s 82 counties lost population from 1940 to 1960, and more than half (43 counties) reached a minimum population during 1930-1970 in 1970. The dense agrarian world of the 1930s unraveled. A coming decline in Delta population was not apparent in 1930. Even with

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6 Holley’s figures are similar to a 1960 study that estimated the actual “net outmigration” for Arkansas alone during the 1940s as 431,000. Brown and Peterson (1960), p. 11-13, in Bolton (2000), p. 148.
Delta Outmigration by Decade

![Delta Outmigration by Decade](image)

Figure 5.1: Delta (Mississippi, Arkansas, and Louisiana) outmigration by decade, 1930-1970

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Percentage of Total Delta Outmigration From Each State, 1930-1970

![Percentage of Total Delta Outmigration From Each State](image)

Figure 5.2: Delta outmigration; data from Holley (2000), p. 150, had less than 10,000 persons. Note: Louisiana gained about 7,000 persons during the 1930s (equal to 3% of the absolute value of Mississippi and Arkansas’ combined population loss), so an outmigration value of “0” is assigned for Louisiana in the 1930s.
the uncertainty of harvest and natural disasters in the 1920s, the populations of some of
the most cotton-dependent clusters increased during that decade. Additional
demographic patterns are seen by race: of all Delta outmigrants, white outmigrants
dominated the 1930s, while black outmigrants dominated population losses by the 1960s
(Figure 5.4). Mississippi’s share of Delta outmigrants increased to 1970.

These population declines are not miniscule mathematical rounding errors.

Consider the population losses in the heart of the Delta from 1930 to 1970: Sunflower
County lost over 29,000 residents (a loss equivalent to its total population in the present),
Bolivar County lost over 21,000 residents, and Tallahatchie County lost just over 16,000

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7 The heaviest cotton-producing cluster in northeast Arkansas, for example (Craighead, Crittenden, Cross,
Mississippi, Poinsett, and St. Francis counties) grew 33% in the 1920s, from 181,000 to 242,000.
residents. Altogether, the ten Delta counties in Mississippi with the greatest population exodus combined for a population loss of over 143,000 residents from 1930 to 1970. In addition, these exodus figures would be evident in statewide losses were it not for concentrated growth in a few non-cotton urban areas. In Mississippi, for example, population increased by over 292,000 from 1930 to 1970 in just three counties: Hinds County (metropolitan Jackson), and Harrison County and Jackson County (metropolitan Gulfport and Biloxi, and metropolitan Pascagoula, respectively; both counties are situated

![Figure 5.4: Demographics of outmigrants, net outmigration figures, 1930-1970. Note: there was a net in-migration of Louisiana whites during the 1930s and Arkansas whites in the 1960s.](image-url)
along the Gulf Coast.) Were it not for certain non-Delta “Sunbelt” urban growth, state populations would have dwindled even more during this mid-century period.

While the farming regions were depopulated, most cities in Delta states grew, since most migrants travel short distances.\(^8\) Little Rock’s Pulaski County gained 150,000 persons from 1930 to 1970, Jackson’s Hinds County by 130,000, and the Gulf Coast counties of Harrison County (Biloxi and Gulfport) and Jackson County (Pascagoula) grew by 90,000 and 72,000, respectively. Some urban gains had specific catalysts: Arkansas cities, both larger and smaller, grew during the 1940s, often as a result of defense plant location during World War II. Bolton notes that “wartime jobs had brought people into town, but civilian jobs kept them there.”\(^9\)

Rural-to-urban in-Delta-state migrations served as feedback loops. As more and more farm laborers left the fields to work in a factory in the city, farm owners were able to experiment (by chance or by necessity) with mechanization, which reduced the number of required farm laborers, which meant that even more agricultural workers would leave the farm for the city. And because many plantations were like Hopson Plantation in that they were reliant on daily wage labor for an employee pool, a laborer’s decision to leave for the city was an easy process compared to a landless tenant farmer who still owed a planter a significant debt.

The urban gains and rural losses within this period should not be seen entirely as Delta-specific; there were broader population trends at work during the time. The entire vertical swath of plains states, from North Dakota south to Oklahoma, for example, all lost population during the 1930s in the era of the “Dust Bowl” and its associated crises.

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\(^8\) See Ravenstein (1885), Lee (1966).
West Virginia declined by over 260,000 persons between 1950 and 1970 as a result of mechanization of (and the low pay for dangerous work in) Appalachian coal mines.

Additionally, the urban gains should be seen as part of larger process of “Sun Belt” gains in the South and West, usually from “Rust Belt” cities in the Northeast and Ohio Valley. Flint, Youngstown, Grand Rapids, and Dayton were among the 50 most populous U.S. cities in 1930; none were by 1970, replaced by Sun Belt newcomers such as Tampa, El Paso, Tulsa, and San Jose.\(^{10}\)

A particular reading of outmigration as the driver of substantial ethnic demographic shifts should be avoided. In 1900, the Mississippi Delta cities of Yazoo City, Vicksburg, Natchez, Greenville, and Greenwood, Holly Springs, and Canton all were majority African-American. By 2000, all of these Mississippi cities were still majority African-American. In 1900, Shreveport, Louisiana was 53% black and 46.5% white; in 2000, Shreveport, Louisiana was 51% black and 46.7% white.\(^ {11}\) Population compositions did not necessarily shift, and the shifts that occurred were not geographically uniform. The image of black sharecroppers boarding one of the many trains to the north from the Clarksdale depot ought not to be the only image; the great rural exodus was not a black migration or a white migration, it was a rural migration.

The long-term effects of migratory patterns away from the Delta have led to demographic shifts at the state level, however. In 1900, Louisiana and Arkansas had nearly equal white and black populations (52% white-48% black in Arkansas, 53% white-47% black in Louisiana), and Mississippi had a large majority of black population

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\(^{11}\) 1900 Census, Mississippi. “Sex, General Nativity, and Color – Table 23: Population by Sex, General Nativity, and Color, For Places Having 2,500 Inhabitants or More: 1900”, p. 618, 625.
(41% white to 59% black). By 2000, a century of black outmigration had changed the human landscape of the Delta: Louisiana was 64% white (against 33% black), Arkansas was 80% white (against 16% black), and Mississippi was 61% white (against a 36% black population). In Louisiana, 18 of the 21 “cotton parishes” identified by de Jong lost population in the 1940s (a far greater decline than identified “sugar parishes”). Early twentieth-century parish population growth in Louisiana centered on parishes with at least one larger city, and black in-state migration in Louisiana was rural-to-urban.

Beyond rapid growth (typically in urban counties) or long-term decline, a third hallmark of Delta population geography exists: general stagnation. Louisiana’s West Feliciana Parish is an example of this stagnation: between 1840 and 2010, the parish population never fell below 10,000 and never rose as high as 16,000. The West Feliciana Parish populations of 1840 and 1930 were nearly identical, as were the populations of 1940 and 1970. The population of an individual cotton parish in Louisiana over 170 years has remained very low, and remarkably stable.

Increasing urbanization has been a hallmark of population (Southern, American, and global) over the past two centuries. The population of the United States topped 50% “urban” for the first time in the counting of the 1920 census. That represented a dramatic shift from just 40 years prior, when the national population was just 29% urban compared to 71% rural. Yet in the South, transition from rural to urban was extremely

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14 The U.S. population gained 17 million persons between the 1920 and 1930 U.S. Census. Yet of the 17 million, 14.6 million were gains in “urban” places and just 2.4 millions were gains in “rural” places.
15 “Table 1 – Population of the United States, Urban and Rural: 1880 to 1930.” 1930 U.S. Census
slow. The historical Delta was defined by an even higher percentage of rural residents. In general, higher-population counties tend to have a higher urban population (defined as a percentage of total residents living within any city’s incorporated administrative boundaries) than lower-population counties. For example, Arkansas population shifted from 73% rural- or unincorporated-majority in 1920 to just over 40% rural- or unincorporated-majority by 1970. The difference was considerable: in 1920, the state’s most populous 172 towns comprised a quarter of the Arkansas’ total population; by 1970, 25% of Arkansas population was composed of its 10 most populated cities.

Additional investigations must be given to population changes other than migration: namely, natural increases and birth rates. Nationally and regionally, birth rates had declined after 1900, and bottomed out in 1935 during the height of the Great Depression. In both the United States and the Delta, after an upward climb in the birth rate, progressing past the immediate late-1940s “baby boom”, birth rates peaked in the late 1950s, before settling within a stable rate range by the early 1970s.

While a discussion of population changes would likely have shifts in birth or death rates as paramount, in the mid-twentieth-century Delta, total measures of outmigration appear to be far more influential on state populations than any rises or falls.

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16 The statewide rural-urban population percentages for Alabama barely declined from 88% in 1900 to 83% in 1910 to 78% in 1920. 1920 Census “Alabama – Table 1”.
17 In Alabama in 2000, for example, Birmingham-containing Jefferson County (population 662,000) had just 12 percent and Montgomery-containing Montgomery County (population 223,000) had just 10 percent of its total population living outside incorporated cities. Comparatively, smaller counties such as Washington County (total population 18,000) and Coosa County (population 12,000) had unincorporated-rural-population-per-county measures of 89 percent and 83 percent, respectively. Unincorporated populations cannot always be used as proxy for “rural” settlement, as US states have different legal urban geographies and incorporation patterns. Consider the suburban Atlanta counties of Cobb County, Georgia (total population 607,000) and Gwinnett County, Georgia (total population 588,000), who have unincorporated populations compared to total populations of 33% and 22%, respectively. In this case, the more than 865,000 unincorporated residents in the two counties are far from “rural”: in unincorporated Cobb County sits the growing Cumberland district, a textbook example of an edge city, home to the corporate headquarters of The Home Depot and The Weather Channel.
in birth rates. In general, the Delta core counties outmigration of 2.6 million persons between 1930 and 1970 (which reached a peak outmigration in the late 1940s and early 1950s) persisted absent of any changes in regional birth rates. In the 1940s, for instance, Delta birth rates rose rapidly, yet the late 1940s was a period of massive Delta population decline. Similarly, Delta birth rates fell quickly in the late 1960s, even though Delta states began to “recover” lost populations around the same time. Overall, birth rates had little effect on region-wide trends of a mostly rural ex-tenant farmer exodus. This should not be taken as an argument that demography did not matter; but established components of changes such as crude birth or crude death rates were statistically overwhelmed by the voluntary movement of rural families away from the cotton lands.

Other trends are evident: while the 1950s were one of the largest periods of population decline for the Delta, the various Delta states’ total fertility rates increased from 1950 to 1960. Mississippi’s total fertility rate in 1950 was 4.0 (representing 4 children born to the average Mississippi woman in her lifetime) and this rate was the third-highest rate in the United States. Mississippi’s total fertility rate increased to 4.26 by 1960.19 Yet, Mississippi’s total population fell between 1950 and 1960. Although more children were being born in the Delta as the 1950s progressed, population losses continued. The high number of farm workers and ex-tenant farmers leaving the Delta entirely presented a far greater demographic shift.

Both Delta-wide and nationwide, fertility and birth rates dropped sharply after 1960 (Figure 5.5). This drop is typically explained due to greater availability of contraception and a later average age of an individual’s first marriage.20 Yet, after 1960,

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19 Smith and Ahmed (1990), p. 213.
20 See Guldi (2008) for more on the fertility effects of contraception.
when birth rates were falling in the Delta, populations in Delta states gradually began to rebound as outmigration slowed. These and other measures indicate an important, and perhaps surprising trend: while birth rates played a role in influencing regional population change, the overall trend of Delta depopulation between 1930 and 1970 was driven by outmigration far more than births and deaths.

A comparative examination of birth rates between the Delta states and the United States as a whole, particularly during the period between 1940 and 1970, illuminates this point. (The average Delta state birth rate in this period was always at or above the national average birth rate, so the ratio of Delta rates to the United States rates is above 100%.) The Delta-to-national birth rate decadal averages are as follows: in the 1940s, 128% of the US birth rate; in the 1950s, 115% of the US birth rate; in the 1960s, 110% of the US birth rate; in the 1970s, 105% of the US birth rate; and beyond the 1970s, the Delta birth rate has hovered slightly above the national average, at about 101% of the US birth rate.
Two insights are gained from these figures. First, the birth rates of the Delta, while outliers to the national rate during the era of World War II, gradually aligned with national births. The Delta South was previously a region with more children per family than the average American household, but this distinction waned after the 1940s. An explanation of this initial gap and subsequent coalescence could be further evidence of the decline of mass-labor cotton farming, particularly tenancy. In the tenant farming era, a farmer with many children (and thus many hands to work in the cotton fields) had a local comparative advantage of labor, so the 128% Delta-to-national birth rate ratio can be explained. However, in the era of mechanization (in the late 1940s and beyond), more children (and therefore more potential manual labor) are of no economic advantage in a cotton Delta without tenant farming. Therefore, the path of Delta birth rates converging towards the national rate after the 1940s follows the labor trends of an increasingly mechanized, tenant-less Delta.

A second insight is revealed by comparing this Delta-to-national ratio to total Delta population changes. The Delta birth rates converged to the U.S.-wide set of birth rates between 1940 and 1960 in particular. However, during this same twenty-year period, the population of the United States continually increased while the Delta states declined in population (with very large declines in the core cotton counties.) Therefore, while birth rates are important components of total population change, in the mid-twentieth-century Delta, the influence of such demographic measures are far outweighed by actual outmigration movements.

Further analysis of state birth rates would support this idea: for Arkansas, although a rise in birth rates between 1940 and 1950 (average 1940s birth rate of 29.1 per
1,000 persons compared to the 1940 birth rate of 26 per 1,000 persons) that hypothetically “should” have resulted in a rise of just over 5,000 “extra” Arkansas residents (assuming static death rates during the 1940s) did not occur; instead, population for the state fell by 40,000 persons between 1940 and 1950. Even assuming the greatest possible gain from birth rates alone (5,000 “extra” residents), this birth rate approach does not account for a 40,000-resident loss – a swing of 45,000 residents, of which the hypothetical birth rate gain accounts for just 11% of the total.

Of additional note is that in-Delta cotton region demographic trends did not necessarily follow non-cotton core demographic trends. An analysis of an extensive U.S. Census schedule of the more than 500 individuals living in Webb, Mississippi in 1930 found a demographic breakdown of 157 heads of household, with just 166 children – figures that hardly suggest large families.\(^{21}\) Simultaneously, the median age of Webb was 26 years old, compared to an estimated median age of about 21 for all of Mississippi.\(^{22}\) (A possible reason for this divergence was that incorporated administrative boundaries of Delta towns such as Webb were home to few tenant farmers. The large families had by tenant farmers would be counted within population schedules at the general “rural” county level or county-subdivision level.)\(^{23}\) Other demographic factors are important as well, such as mortality rates, and these factors also changed over the

\(^{21}\) 1930 United States Census: Webb, Tallahatchie, Mississippi.

\(^{22}\) “Table 24: Population: Age by 5-Year Periods.”, 1930 United States Census, Chapter 10: Age Distribution, p. 644. The median age for the state of Mississippi is an estimate because total ages are reported in age groups of five-year periods. A weighted distribution yields a median age of about 21 years for the state in 1930.

\(^{23}\) In Mississippi, rural census divisions were known as “beats”, similar to townships without any governmental power. Arkansas “townships” similarly lacked any significant township-run institutions or township-held political power.
Yet, the 2.6 million in Delta outmigrants between 1930 and 1970 cannot be explained mathematically by rises or drops in birth or death rates. Thus, fluctuating measures of natural increase, birth rates, or mortality rates should not be seen as the primary determinant in Delta population changes.

One additional element of the Delta’s rurality, related in part to the broad rural exodus, is the idea of a population “recovery”. Arkansas reached a statewide population of about 1.95 million persons in the 1940 census, followed by a period of decline associated with its rural exodus. The state population did not surpass the 1940 measure until the 1980 census (at about 2.29 million). The exact “recovery” of mid-century population loss took between 30 and 40 years. Mississippi, while experiencing a smaller decline, did not surpass its 1940 measure until the 1970 census. Similar measures persist in many counties across Arkansas and Mississippi.

But other regions in the Delta have not yet recovered; these counties’ maximum populations were reached long ago. Coahoma County, Mississippi, home to Clarksdale and Hopson plantation, soared to a population of nearly 50,000 in 1950, only to fall to about 30,000 persons by 2000 (Figure 5.6). A mapping of the extended Delta (and Delta states) “peak population” between 1900 and 2000 is revealing (Figure 5.6). Some regions experienced early twentieth-century peaks, such as the boom and bust cycles related to mineral extraction in the Ozark and Ouachita Mountains in western and northern Arkansas, or the southwest Mississippi agricultural world around Natchez and

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24 For example, Mississippi’s neonatal mortality rate was the highest in the country by 1970, but the state experienced a “significant” decline in neonatal mortality from 1975 to 1980. See Strobino et al (1985), pp. 417-418. The neonatal mortality decline averaged a decline of 1 death per 1,000 live births annually among non-white populations and 0.8 deaths per 1,000 live births annually among white populations.
Vicksburg, whose primary Mississippi cotton production region was overtaken by northwest Mississippi.

Other regions have experienced very recent peaks, in the 1980s or 1990s, perhaps signaling the recent decline of local manufacturing in an increasing globalized world of neoliberal policy post-1980. The majority of the counties in extended Delta states experienced a 1900-2000 county population peak in 2000, demonstrating an upward trajectory of growth into the modern era. These regions include the larger metropolitan areas of each state including metropolitan Memphis, Jackson, Little Rock, and New Orleans.

The Delta core largely experienced a population peak from 1930 to 1970, and an even larger contiguous set of counties would have “peaked” during this period if not for some late population gains in the 1990s near Memphis, Tennessee along Tennessee’s western border. A rural exodus of 1930 to 1970, of both white and black residents, with emphasis from 1940 to 1960, is evident. This exodus was not the first, nor was it the only mass movement of peoples from South to North; the wider (geographically and temporally) “Great Migration” refers to the mass migration of approximately 6 million black residents from the South to the Midwest, Northeast, and Pacific West during the twentieth century. More generally, migrants usually came from the rural South and moved to urban areas outside the South.

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25 For an excellent treatment of the Great Migration, see Wilkerson (2010).
26 Widener University. “26. The Great Migration, 1910–1930.” Digital Collections: Wolfram Memorial Library. 2012. Accessed 20 Dec 2012. The demographic impacts of the pre-Depression wave were far less than the post-World War II wave. Consider Detroit, a major recipient of black migrants: Detroit’s black population increased from about 6,000 in 1910 (at 1.2% of the total population) to about 120,000 in 1930 (at 7.6% of the total population.) However, Detroit’s black population experienced far greater increases from 1940 to 1970, as its black population increased from 149,000 in 1940 (9.2% of the total population) to 660,000 in 1970 (43.7% of the total population). Similar 1940-1970 major increases are seen in the sharply rising African-American percentages of Washington, D.C., Baltimore, Cleveland, and St. Louis.
Mid-century migrants held a particular space in a larger cultural context. To many, the Delta population loss was viewed as a net positive, a discarding of excess Delta farm labor. In the words of a local Arkansan in the 1940s, this included the shedding of “submarginal people.”

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appeared in American literature: John Steinbeck’s *The Grapes of Wrath* centered on the Joad family, cotton sharecroppers in eastern Oklahoma, which by the 1930s was (along with Texas) becoming a new cotton-producing stronghold. Erskine Caldwell’s *Tobacco Road* focused on the Lesters, cotton tenant farmers in rural Georgia, and the tension between continuing to farm for less income and moving to the city of Augusta to work in a cotton mill. The non-fiction *Let Us Now Praise Famous Men* by James Agee and Walker Evans brought photographic evidence of the plight of Alabama sharecroppers.28

The “rural” world of the Delta can also be defined a landscape full of “micropolitan” places. 29 The term “micropolitan” is an areal county- or multi-county-level definition assigned by the Office of Management and Budget (used by the Census Bureau) to describe economic regions with a central principal urban core or urban cluster that has a population of at least 10,000 people, but less than 50,000 people. Contrast this definition to the well-known “metropolitan” statistical areas, defined by at least one urbanized area with a principal city or urban area population of at least 50,000 persons.30

In some select instances, historical shifts in transportation modes or transportation routes influenced urban development.31 In the Delta, the plantation had small yet substantial influences on transportation routes. During the mid-nineteenth century, the

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30 The present 10,000-to-50,000-person definition may be scaled down to a 5,000-person lower bound when comparing historical population statistics.
31 In the cotton stronghold of east Texas, the town of Forney transformed as a national east-west highway, U.S. Highway 30, reshaped the town’s economy towards a visitor-oriented automobile culture. Local historian Jerry Flook noted of downtown Forney that “what had once been ‘Gin Row’ became ‘Filling Station Row.’” See Flook, Jerry. “A Brief History of Forney, Texas.” <http://www.historicforney.org/index.php?option=com_content&view=article&id=51&Itemid=53>
first set of Southern rail lines linked specific plantations or plantation regions.\textsuperscript{32} Railways limited to links between extractive sites and port destinations were not unique to the Delta South; similar systems existed in a post-plantation Latin American world.\textsuperscript{33}

Connectivity could also bring population growth: McGehee, Arkansas, in the Mississippi River-bordering Desha County, grew from “about a dozen people” in 1905 to over 2,300 in 1920 as railroads traversed the town.\textsuperscript{34} However, this is not to argue that all of the cotton Delta was saddled with traditional or regressive transportation structures, or that all “new” transportation networks were able to bring about development.

The Delta was saddled with a problem: too many very small towns, and not enough medium-sized towns. These vague definitions are better explained than stated: from an urban hierarchy view, a county with a principal town of 10,000 persons will attract more capital investment, manufacturing, service centers, retail centers, government installations, and so forth, than a county with 10 cities of 1,000 persons each. Across the Great Plains, this spacing of county seats and rail stops for fuel or water is an ordered hierarchy of central places: in the Delta, however, this network failed to develop.

Consider Tallahatchie County, Mississippi, home to an earlier case study of Webb. All three towns of Webb, Sumner, and Tutwiler are within six miles of one another end to end, surrounded by the same topography and farming landscape. All three existed with roughly equal populations (less than 1,000 persons) in 1930, and all three still exist today. Cotton production artificially kept these towns small by keeping the gins on-site, by keeping sharecroppers close to the plantation for a while, and by having

\textsuperscript{32} Aiken (1998), p. 5.
\textsuperscript{33} For example, before the Chilean Longitudinal Railway, railroads were directly from coastal port cities to extractive sites of nitrates and other local minerals. See Barclay (1917), p. 241.
\textsuperscript{34} Encyclopedia of Southern Jewish Communities. “Dumas - McGehee, Arkansas.”
transportation routes such as railways go to a cluster of plantations instead of exclusively to a depot in the county seat. The cotton economy of western Tallahatchie County required some function from each small place, so they remain as three very small towns instead of one central town with two satellite towns.

5.2 Micropolitan Morphologies of the Cotton “Gin Town”

The “cotton gin town” was the bedrock morphological model of urban form and urban place in the Delta. Variations in size persisted, but the cotton gin towns were comprised of a concentration of cotton gins and ancillary functioned cotton industries, sited near the edge – but not in the center of – the historic commercial or governmental district. The most important aspect of a typical cotton gin town’s geography was that the specific cotton industries of a gin town created landscapes of function, not form. As a result, access to transportation lines was often paramount, as the cotton economy did not end at the gin; cotton had to be shipped to some other place, so twentieth-century gins were nearly always located along rail routes. The cotton transportation routes were usually rail, but also river or, more recently, highway.  

Because the cotton cluster (and the cluster of ancillary agribusiness industries) was located at the edge of downtown instead of beyond an entire city, cotton towns still developed regional-style town squares with central courthouses and planned city districts. As these towns declined as part of a larger Delta trend by 1970 and beyond, the disappearing cotton blocks did not necessarily doom a gin town’s “downtown” immediately. But the associated loss of industry and commerce eventually saw a similar

35 Examples of these rail lines include the “Cotton Belt Railroad” serving Texas, Louisiana, and Arkansas, that allowed rail connections of cotton (including spur lines to individual gin towns or individual large plantations) to St. Louis and Memphis for further export.
state of decay for various gin towns’ “Main Street” after 1970. The gin town only came of age when ginning functions moved from the plantation to independently-owned ginning companies; yet in the modern era of large-scale mechanized cotton production and modular baling these small-town gins have mostly disappeared.

Furthermore, the urban morphology of a particular cotton gin town involved a commercial landscape of much more than merely the cotton gin building. There were other commercial interests involved in this first-market of cotton receiving: cotton oil mills, seed houses, cotton warehouses, cotton compresses, bailed linters’ sheds, guano houses, head commercial offices, fertilizer mixing buildings, ice houses, and grist mills were all typical examples of commercial sites in a cotton gin town downtown. Existing places of cotton agribusiness did not necessarily represent a “new” post-1900 form of urban development; rather, it is both the union of cotton gins and cotton-related industry, as well as the move of cotton processing from individual plantation to town, that represents the innovate urban system development seen in the Delta.

The cotton economy was certainly dominant, yet there were other commercial functions of some of these places (including supply stores for farmers, county courthouses and their ancillaries, and general stores for food, clothing, and tools). In 

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37 Aiken (1998), p. 46-48. Of note are the generally larger railroad depots than functionally necessary in the South, since Southern rail depots had two separate racially-segregated waiting room spaces.
38 In the height of the tenant-farming era, cotton gins were often situated near the headquarters of a particular plantation’s (or landowner’s) commercial buildings. The cotton gin would likely be contained in the same general building complex as the plantation owner’s commissary and business office. Gin activity served the same function as a town-centered gin establishment, as often rail or road transportation linked directly to the commercial center of these large plantations in the Delta, such as the complex at the Hopson Plantation near Clarksdale, Mississippi.
39 Cotton compresses were used to flatten ginned bales for ease of shipping. By 1900, these compresses were typically constructed along the “right-of-way” areas owned by railroad companies, as the flattened bales would be placed directly on railroad cars for export. The center of gravity for local cotton processing became the rail depots rather than the plantation fields. Karen Gerhardt Britton et al, “Cotton Culture,”
fact, the gin towns were often commercial-viable, fully-functioning entities apart from the business of cotton production and management. So, it is ironic to note that many of these same towns only began their long economic and population decline when the cotton gins eventually closed and vacated those small towns.

The cotton gin itself did not necessarily require the same geographic space as towns built along growth poles with considerably larger areas, such as an airport or a university complex. From investigations of mid-twentieth-century primary data in the Tallahatchie County Courthouse in Sumner, Mississippi, old plat maps show the property size of a sample rural “gin & store site” at just under two acres.

There are many surviving examples of the gin town, yet these come with a caveat: while many of the actual towns still exist in the legal and administrative sense, most of the cotton gin industries of these places have long ceased to function. Thus, the political “town” does exist, while the vestiges of a former cotton business landscape do not. The vast majority of ginning, like most of agriculture in the Delta and the larger American farmscapes, has undergone a transition of scale: more consolidated acreage, more mechanized automatic processes, more production and yield, requiring less labor. This move to a more modern form of agribusiness is described by Prunty, who describes this process of “modern” gins writing in 1972, noting “[m]odern gins represent large capital investments. Customarily they are not single enterprises devoted solely to ginning but are parts of businesses which may also include cotton warehouses, fertilizer and farm

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equipment sales, seed cleaning and sales, herbicide and insecticide application and mechanical harvesting service...  

The spatial bounds of the cotton gin town model include historic cotton-producing regions of the American South, within general boundaries of climate: far enough east to receive sufficient precipitation, and far enough south to ensure sufficient frost-free growing days. This definition yields a rough outline of the entire former Confederacy, so this is not a satisfying geographic bound. However, as the Mississippi Delta far surpassed the Piedmont region in terms of cotton productivity in the early twentieth century, the central region for cotton production in a twentieth-century context – and therefore the regions that would most likely exhibit a legacy of cotton gin towns – would be this Trans-Mississippi River Delta core area.

Broader questions of spatiality of cotton gins have been explored: Lösch’s noteworthy studies of location used some examples of cotton gin distribution as support for his idea of a belted market network in which the main location of multiple commercial market regions were geographically close without overlapping. A 1920 study of Piedmont farmers found that the average distance traveled to transport their cotton to market averaged between 2.5 to 5.1 miles. Assuming this range, I can ascertain a likely gin market region of somewhere between 30 and 100 square miles, with somewhere around a dozen small gin towns per county (using the Mississippi Delta county size, for comparison) in that particular North Carolina study.

The earliest appearance of the “modern” gin town era, as ginning sites moved from plantation to town, would be the turn of the twentieth century, extending until the

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42 See Prunty (1972)
middle of the twentieth-century (with some small gin locations extending into the twenty-first century), with a maximum size of most gin towns reached between 1940 and 1960. Modern, automated cotton gins in the South are primarily located away from a downtown (as rail transport is unnecessary), staying close to highways, enabling access for large truck shipping. The location of the cotton agribusinesses *near-but-not-in* the town centers created an elongated commercial/industrial downtown district, similar to smaller “company towns” in the wider American North. Additionally, with this industrial region of the town located outside a historical town’s commercial center, in some cases these gin towns might represent historical examples of early industrial exodus from downtowns to edge-of-town locations, thus serving as harbingers of a large-scale wave of industrial relocation seen in the middle of the twentieth-century.

In the cotton town of Webb, Mississippi in Tallahatchie County, 1921 land plat maps show a town with a smaller geographic bound than the modern spread of Webb. In the 1921 map, records reveal that Webb’s agribusiness functions were near the major railroad line (Figure 5.7). Later maps identify named gin companies on the eastern edge of the town, away from the town’s outright center. Webb is an important exemplar because of its continuity into the late twentieth century. By this time, Webb’s territory had increased, and the “gin” district – albeit a modern one, in some ways already in decay by 2000 – existed in a highway-focused landscape. The “modern” shaded region identifies the broad location of the modern Wade Industries and older agribusiness locations. This modern region is also identified by a particular toponymic characteristics in its roads: “John Street” and “Deere Avenue” (reminiscent of John Deere mechanized
Figure 5.7: Webb, Mississippi. The shaded blue region at top roughly bounds the street location identified in the 1921 plat map of Webb in Figure 5.11. The shaded red region at lower right identifies the “modern” agribusiness landscape of Webb, with cotton-familiar street names and business locations near those streets. Base map from open-source OpenStreetMap and OpenStreetMap contributors, 2013.
agriculture products), “Webb Gin Road”, and “Gin Quarters Road”, all southeast of the historic town center, are testimony to Webb’s past cotton ginning landscape.

In the cotton gin town of Cotton Plant, Arkansas, the 1928 landscape clearly shows a centered downtown, with a supplementary cotton industrial district at the western edge of downtown. Multiple cotton gins, a compress company, and other agribusinesses fill a district located along the railroad, about four blocks from the city center (Figure 5.8).

Figure 5.8: Cotton Plant, Arkansas, 1928. Sanborn Map, Sheet 1. The agribusiness district is at left, along the northwest-to-southeast railroad, on the town’s edge, about four blocks from the city center. The industrial district contains three named gins and many other agribusiness sites. Total west-east map extent is about 1 mile.
In Yazoo City in 1929, a similar edge-of-downtown cluster is apparent (Figure 5.9). In this case, however, an additional spatial division occurred as the “merchant”-type cotton factors or buyers are clustered in one particular district, while the cotton gins and oil mills are located in a different set of addresses (contiguous small regions, but still definite spatial differences in their respective geocoded addresses.)

Figure 5.9: Yazoo City, Mississippi. General 1929 location of cotton factors/buyers (shaded green, on right) and cotton gins/cotton oil mills (shaded red, on left). Base map from open-source OpenStreetMap and OpenStreetMap contributors, 2013.
A wider landscape of “cotton” businesses could fill a cotton gin town beyond the gin, however. In Clarksdale, Mississippi using a 1929-1930 directory, the location of cotton gins but also cotton factors and cotton exchanges is mapped. Unsurprisingly, the spatial clustering appears near the railroad, on a busy street. In this location of a larger town, Clarksdale, the district is clearly at the edge of downtown while still located towards the center of the wider town itself (Figure 5.10). Yet the clustering of cotton gin

![Figure 5.10: Clarksdale, Mississippi, 1929: Location of cotton factors/gins/exchanges. Base map from open-source OpenStreetMap and OpenStreetMap contributors, 2013.](image-url)
locations was not always the case. Monroe, Louisiana and West Monroe, Louisiana were also mapped for the widest definition of “cotton” industry sites using data from a 1933 city directory, including cotton brokers or factors (Figure 5.11). With multiple rail connections, and a north-south riverine connection, no one particular part of Monroe or West Monroe is able to lay claim as the only cotton center of the town. Perhaps this

Figure 5.11: Too large for a cotton district: 1933 cotton-related establishments in Monroe and West Monroe, Louisiana. Ouachita Parish population was over 54,000 in 1930, and Monroe population was over 26,000 in 1930. Base map from open-source OpenStreetMap and OpenStreetMap contributors, 2013.
broader cotton view results from the larger populations of Monroe and West Monroe: Ouachita Parish, the parish in question, had a 1930 population of over 54,000, most of which lived in the twin cities of Monroe and West Monroe. A large enough population spread the cotton center apart.

5.3 Non-Cotton Micropolitan Delta Places

Cotton was not the only crop or core industry; beyond the Delta core (and in rare cases, within core cotton counties), additional micropolitan urban development attempts persisted, including extractive resource-based towns, government settlement (and “resettlement”) towns, and resort towns. These “other” urban nodes were not totally insignificant during the period from 1930 to 1970, yet the productive value of cotton still dwarfed the long-term prospects of most of these additional micropolitan places.

Worth noting is that during this mid-century period, particularly after World War II, the true metropolitan places in and near the Delta – Memphis, Jackson, Little Rock, and Baton Rouge – were transforming into dynamic service centers, surrounded by a growing ring of suburban residential development, connected by new multilane controlled-access roads and bypasses as part of the Interstate Highway System. These metropolitan areas were far more essential to Delta state economies than cotton farms by 1970, or even post-1945. However, their growth and development was typically beyond the cotton belt (other than Memphis), so the question of urbanization and development in the cotton counties remains. Also, these metropolitan areas, by their (lack of) locational geographies, could not fulfill the roles as a particular extractive resource town, for example, so these “other” micropolitan places are indeed worthy of study.
Towns built near or surrounding industrial sites dedicated to extractive resources were common in the near-Delta regions. The town of Bauxite, Arkansas (discussed in Chapter 4) began as a “company town”, divided into several demographically distinct neighborhoods, close enough together to be a part of Bauxite, but far enough away to have individual identity, including named encampments of “Africa”, “Italy”, and “Mexico.” Most Delta-state extractive industries related to mining were located within the broader Ozark or Ouachita Mountains regions in Arkansas, as those were the largest mountain chains within the multi-state Delta (with Tennessee regions limited to west Tennessee). Zinc, lead, quartz, manganese, diamond and even small-scale silver production helped fuel towns beyond cotton regions, yet most of these minerals were seen predominantly as “strategic” by the Federal government, and were typically of focus only during wartime years when those minerals were particularly needed. These often ephemeral ventures’ nearby towns were not “company towns”, and usually had populations below 1,000 persons.

Mining enterprises beyond the various foothills of Arkansas was rare: only a few coal mining attempts existed in the last century in Mississippi, leaving trace evidence (including a single air shaft near Ackerman and the Tombigbee National Forest) in the hillier eastern Mississippi region. Coal mining was an important industry in Arkansas, but its heyday ranged between 1880 and 1920, with a geographic focus in the hills near the western Arkansas River Valley between Russellville and the Oklahoma border. Oil and gas were part of urban “booms” in the 1920s, as towns such as Haynesville in

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43 A small non-company town of Bauxite (less than 1,000 residents) exists present-day.
44 Howard (2011).
northern Louisiana, and El Dorado in southern Arkansas grew past 20,000 and 30,000 persons, respectively during this decade, followed by a period of slow decline.\textsuperscript{45}

Lumber towns (and the more transitory timber camps) were most common in north Louisiana and south Arkansas. Some Delta subregions mixed cotton and lumber production: Robert E. Lee Wilson, inheriting his portion of a divided cotton plantation, turned his mostly-swampy northeast Arkansas land into a profitable lumber company by clear-cutting the bottomlands in the late nineteenth century, using those profits to accumulate of over 60,000 acres of cotton lands by the 1930s. Lee Wilson also planted four separate “company towns” in Mississippi County, Arkansas (towns that transitioned from initial lumber towns to cotton belt towns): the towns of Wilson, Marie, Victoria, and Armorel.

Historical waves of government investment as “stimulus” existed in the wider South in the wake of the Great Depression and World War II. Attempted Keynesian ideas in one form or another have led to growth-pole policies (such as the Depression-era rural electrification movements of the Tennessee Valley Authority), infrastructure initiatives (the Appalachian Regional Development Commission’s efforts of highway building in the wake of President Lyndon Johnson’s War on Poverty) and the government shaping of the defense industry proliferation and location through successive Cold War conflicts (the so-called Gun Belt).

Yet other town types existed beyond cotton and extractive places, existing beyond private development ventures altogether: state-supported (or state-controlled) settlement. In the 1930s, the New Deal itself brought about change in the Federal government’s role

\textsuperscript{45} The “bust” cycle has hit Haynesville hard; a more recent natural gas bust was led to a Haynesville with a population less than 3,000 persons in the present.
in urban development through the actions of various settlement and “resettlement” agencies, from the Farm Security Administration to the Resettlement Administration.\textsuperscript{46} The town of Dyess, in southern Mississippi County, Arkansas, founded in 1934, represented one the Delta’s best attempts at Federal programs of resettlement. Named after William Dyess, Arkansas’ head of the Works Progress Administration and Federal Emergency Relief Administration, the town was conceived as a place where extremely poor Arkansas families could resettle, farm, and create a new town.\textsuperscript{47}

Such progressive policy and optimism preceded the town’s construction, yet the settlement produced mixed results. Changes in federal oversight occurred as the Resettlement Administration took over the town, and the site needed to be cleared and drained and roads needed to be built before permanent homes could be constructed. (Dyess was built on the location of some of the remaining swampy bottomlands inland from the Mississippi River.) Shifting federal requirements and government-paid wages for construction tasks meant less time for farming tasks. After 1938, as federal loans were repaid and the “colonists” took ownership of their land, a familiar process occurred: land parcels were bought and sold among Dyess residents, with some accumulating larger and larger parcels; the town population declined from 500 families to around 500 people. This New Deal urbanization attempt, like many other federal projects in the mid-century Delta, was short-lived in its influence.

In Mississippi, however, the New Deal also contained various programs of “industrial” settlement, including locations in southeast Mississippi closer (but not on) the Gulf Coast near Hattiesburg and Meridian. “Farm communities”, however, (such as

\textsuperscript{46} See Alexander (1943), and Badger (2007). Coleman (2010) noted that hardly any of the Farm Security Administration farming communities were ever profitable, and the reputation of the FSA was challenged.

\textsuperscript{47} Pittman (1970), p. 313; Dyess “Colony” was the boyhood home of Johnny Cash.
the farm cooperate at "Milestone Farms" in Holmes County) were indeed located in the Delta (Figure 5.12). Louisiana’s government-managed settlement also included Delta locations, particularly those near Vicksburg, Mississippi (including Mounds Farms and Transylvania Farms). Arkansas resettlement locations were overwhelmingly in the Delta, including Dyess, Plum Bayou, Crew Lake, and Lake Dick.

Additional micropolitan forms were defense industry towns, where the location of a defense industrial site served as a growth pole attracting new workers and residents. These forms of towns were the most successful examples of micropolitan urbanization attempts in the rural Mississippi Delta, because the defense industrial site typically remained open and productive in post-war environments, keeping residents in place.

These defense-related installations or sites (whether government-owned or private-owned) tended to be located in small to mid-sized towns outside of the historic riverine cotton belt, clustering near such locations as Alexandria and Shreveport in Louisiana, and Camden and El Dorado in southern non-cotton Arkansas. The wide range of urban governance for these places ranged from government ownership of lands and construction of housing (such as training or relocation centers) to wholly private ownership of housing that grew organically as a particular private defense-contracted firm offered new jobs. World War II begat sweeping changes, triggering both new and growing existing urban places. A variety of the defense plant locations outlined in

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48 With a “farm community” cluster location near the Alabama border north of Mobile.
49 The Gulf-Coast-located Terrebonne Co-op plantation in Terrebonne Parish, Louisiana was also part of this larger New Deal planned settlement wave.
50 For more on government resettlement projects in Arkansas, see Mehlman (1970);
52 The effect of World War II on urbanization was not limited to the Delta, yet its results were still massive: the fastest-growing city in the entire United States during the early years of World War II was Mobile, Alabama. Shipyards in that city and others, including Pensacola and Norfolk, attracted wartime use and
brought in wartime labor and population increases. Away from the coast, Tulsa, Atlanta, and Forth Worth became hubs of wartime aircraft testing and industrial production. See Miller (1988), p. 4-5.
Chapter 4 also brought with them new spatial patterns of settlement; these new growth-oriented nodes were typically located beyond the Delta.

Permanent fixtures including army forts or camps and air force bases brought long-term settlement and jobs to regions far away from the Mississippi River. A largely empty and hilly landscape in central Arkansas between Jacksonville and Cabot was transformed into the Little Rock Air Force Base during the 1950s, bringing with it the associated commercial and residential functions of an air base (Figure 5.13 and 5.14). The war brought temporary resettlement as well, in housing at “War Relocation Centers” in Arkansas for “relocated” Japanese in Jerome and Rowher.

A few cotton core towns survived with stable population levels by 1970. However, the overall settlement trend of population decline in the cotton core and population growth beyond the cotton core was evident by 1970. With decreased populations, a decline in local retail, construction, and tax revenues followed. Economic decline eventually followed depopulation, even as many region emigrants were poor ex-tenant farmers or wage laborers.

This chapter has explored a variety of population changes occurring in the Mississippi Delta between 1930 and 1970. A massive wave of 2.6 million Delta residents left the region in search of better economic opportunities, depopulating the cotton core. Cotton “gin towns” declined as tenant farming systems collapsed: fewer individual tenant farmers needed town-located cotton gins. Although several non-cotton towns, with functions ranging from mining to defense locations, thrived beyond the cotton Delta, the decline of hand-picked cotton had rippling effects for Delta cotton core populations – including challenges to traditional labor systems, discussed in the next chapter.
Figure 5.13: Empty hills north of Jacksonville, Arkansas, 1941

Figure 5.14: Same view as Figure 5.15, north of Jacksonville, Arkansas, now full of air strips, roads, and homes in the nearly-finished Little Rock Air Force Base, 1954.
Chapter 6: Labor, Race, and Society in the Delta’s Shadows

A variety of economic and social controls of the cotton Delta were far-reaching: the 1940 U.S. Census lists Frank George, a black man aged 70 years old, as a “farmer” living in Bolivar Township in Jefferson County, Arkansas. Personal correspondence from 1933 includes additional detail on the life of a Mr. Frank George. C.H. Triplett wrote D.E. Tucker, asking, “Frank George rented a little hay land from us last year at $2.50 per acre, the total being $5.50. We have tried several times to collect from him, and have just found that he is trading with you. Can't you charge this to him and give us credit for it?” As examined in a case study of Tucker Plantation in Chapter 3, Triplett and Tucker were the two largest landowning families in the 36-square-mile section around Tucker in 1905, 1950, and in 2008. What matters is the reality that in the twentieth-century Mississippi Delta region, larger economic forces were at play in society. Cotton agriculture had a definite hierarchy of rules and controls, and most farm labor held a perch on the lowest rung of this agricultural ladder.

This chapter argues that specific constraints placed on lives and livelihoods in the Delta – constraints that were economic, social (usually race-based) and political in nature – allowed a traditional system of an agricultural hierarchy to persist until the latter half of the twentieth century. In the Mississippi Delta, the century after emancipation often saw social arrangements that were “slavery by another name.”¹ Labor oversupply, institutionalized discrimination, and a hierarchy of paternalistic ex-plantation elites had an enormous effect of a cotton region in flux.

¹ This phrase is used by Blackmon (2008) as a title to his work on the convict-lease program in the South.
6.1 Labor in the Fields: Economic Systems of Control

Isaac Crawford, born a slave in Holmes County, Mississippi during the Civil War, remarked that in his free adult life he moved to a farm near the Delta town of Brinkley, Arkansas for a simple reason: “Better land and no fence law.” Yet the “no fence law” of Crawford’s experience was merely a drop of optimism among an enormous, widespread system of economic controls placed on the common Delta citizen by the local elite. The stark reality of early- and mid-twentieth-century Delta life was that the socioeconomics of cotton farming in the Delta, far more than farms in the Midwest or the Ohio River Valley, were reliant on the economic controls and systems maintained by the planter elite. Isaac Crawford’s vision of the individualistic freedom of a hardworking yeoman was a mirage.

The economics of the Delta were sharply stacked against the average cotton laborer, though a variety of official regulations and unofficial curbs on financial freedom. It is attractive to assume that all economic disadvantages faced by southern labor in this period were somehow cultural in nature; yet, these economic controls were largely a result of the Delta’s population geography – its spatial arrangement as a group of rural, agrarian states. In 1930, the population of Mississippi was 83% rural and Arkansas was 79% rural. In 1970, even after a massive rural exodus (that would artificially boost urban populations with the loss of rural residents) and sweeping technological changes in cotton production (that hastened the rural exodus), Mississippi was still 56% rural and Arkansas was still 50% rural.3 With the widespread failure of Delta-centered manufacturing

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3 The United States was 43% rural in 1930 and 26% rural in 1970. “Table 1. Urban and Rural Population: 1900 to 1990”, U.S. Census Bureau, 1995.
attempts in the twentieth century, there were few “other” jobs to be had beyond the cotton field. For a poor rural resident in Mississippi in 1930, employment was synonymous with cotton production. This widespread rurality eventually resulted in an oversupply of labor, as virtually every local able-bodied Delta resident was a potential farm laborer. With labor oversupply, economic, social, and political power resided in the hands of landed cotton plantation owners.

For cotton laborers in the late nineteenth and early twentieth centuries, there was little motivation to leave, as few economic opportunities were available elsewhere (particularly for African-Americans). Even when factory jobs in the North began to act as a “pull” factor for northward migrations after 1910, the cycles of indebtedness acquired through sharecropping meant that some did not have the ability to leave.

While the average cotton tenant farmer or wage laborer did not become wealthy from picking cotton, the cotton farmowner typically had a relatively high set of labor costs, because of the labor-intensive nature of picking cotton. At harvest, hundreds of workers were needed to pick cotton, and in other months, workers were still needed. U.S. cotton production was temporally-intensive for labor. Regular clearing maintenance (known as “chopping” cotton) could take up to nine months a year.4

Historically, the high labor costs of cotton production, both antebellum and postbellum, have been blamed for a variety of economic disadvantages of the cotton South.5 While the labor-intensive nature of cotton production had fallen dramatically during the nineteenth century, gains stalled during the early twentieth century. The man-hours of labor required for a single bale of cotton was nearly equivalent in 1880 and

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4 Hugill (1988).
5 Earle and Hoffman (1980) identified high labor costs as a reason for the South’s lag in industrial development.
1925. Significant increases in labor productivity were made during the 1930s and 1940s, halving the man-hour inputs of cotton production by the end of World War II, but an even more rapid progress occurred during the 1950s and 1960s, due to the widespread adoption of mechanical cotton pickers.\(^6\)

To the planters of 1930, in many ways, their estates’ physical production of hand-picked cotton had changed very little since the Civil War.\(^7\) The cotton industry needed masses of labor to work in the fields. Cotton production required a higher density of workers per geographic area compared to other staple crops throughout the United States. A 1943 study compared “man-hour labor requirements per acre”, finding that soybean per-acre production required 16 man-hours of labor, corn per-acre production required about 27 man-hours per acre, barley per-acre production required between 9 and 10 man-hours per acre, yet cotton per-acre production required a whopping 133 man-hours of labor.\(^8\) Cotton production, centered in the Mississippi River Delta, was a wildly inefficient system of managing labor in the first half of the twentieth century.

Labor statistics in South Asia revealed a world still entwined in a mass-labor landscape not exclusive to cotton production. In Pakistan in 1965, there was one agricultural worker for every 3 acres of agricultural land and in India in 1970, there was one agricultural worker for every 4.8 acres of agricultural land. (Comparatively, in the

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\(^6\) National measures of man-hours per bale of cotton produced declined from 601 man-hours in 1800 to 438 man-hours in 1840 to 303 man-hours in 1880, but then ranged from 284 in 1900 to 299 in the late 1910s to 296 in the early 1920s. The man-hours rate declined from 146 in the late 1940s to 74 in the late 1950s to 30 in the late 1960s and 26 man-hours per bale in 1970. “Man-Hours Per Unit and Yield Per Unit of Production of Selected Crops and Livestock: 1800 to 1970.” U.S. Department of Commerce, 1975.

\(^7\) Holley (2000), p. 2.

\(^8\) Welch and Miley (1945), p. 931.
United States in 1960, there was one agricultural worker for every 353 acres of agricultural land.)

This system of labor arrangements developed immediately after the Civil War as a system of shifting compromises and trial-and-error between former masters and former slaves; generally black workers (and poor white workers) wanted to own and farm their own land, whereas the white former slave owners wanted to receive labor on their owned land for cash payments. Eventually a type of tenancy-based system occurred, where a poorer worker would give some percentage of his crop to the landed owner in exchange for land to farm.

The basics of ownership break down as follows: under cash renting, the landlord supplied housing and land, the tenant provided everything else, and the tenant kept the entire crop minus a fixed amount of cash (or cotton). Under share renting (or share tenant farming), the system is similar to the cash renting system except the landlord also provided some amount of fertilizer, and received between one-fourth and one-third of the crop. Under the sharecropping system, the landlord provided every sort of furnishing, seed, tools, housing, and so forth, with the payoff being that the landlord and tenant evenly split the crop.

These layers are commonly referred to as the “rungs” of an “agricultural ladder” (or a “tenancy ladder” that describes divisions among renters only). It is this last form of labor, sharecropping, that became the most prevalent system of agricultural labor in the Delta, due to the landlord’s high return on investment, and due to the tenant’s low financial barrier to entry. In the “New South” era, this sharecropping system was of

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9 Data from Hayami & Ruttan (1971), Appendix A.
particular attraction to black farmers who, particularly in the late nineteenth century, lacked the capital investments required to own or purchase the initial required costs of a single-family farm. Sharecropping had little economic potential beyond subsistence; modern estimates place a typical sharecropper’s daily wages at a little under 65 cents.\textsuperscript{11}

Population increases within largely rural Delta states devoid of large cities (and their associated economic opportunities) meant that by the first few decades of the twentieth century, a massive oversupply of cotton laborers existed. Wages were low, and any organized resistance by workers was for naught in the midst of an entrenched planter class with little impetus to change. However, in the 1940s, due to early migratory movements as part of the larger “Great Migration” of African-Americans to Northern cities and the temporary loss of able-bodied men fighting in World War II, an undersupply of cotton laborers occurred.

It was during these early 1940s labor shortages that the power of temporary hires, or “day labor”, became evident. Plantations near Clarksdale, Mississippi paid for the use of a Greyhound bus to collect potential day laborers from Clarksdale and distribute them at each plantation for a day’s work in the cotton fields. Cross-state labor recruitment during this period was common as well, and wages increased in this (extremely temporary) laborers’ market. Rutkoff and Scott described the scene of day laborer clustering in Clarksdale: “Early in the mornings, plantation trucks appeared at Fourth and Issaquena, where pickers congregated, to pick up laborers to work in the fields.”\textsuperscript{12}

\textsuperscript{12} Rutkoff and Scott (2005), p.139. Named plantations include Stovall, Hopson, and King-Anderson.
While a shortage of labor would in theory support a small power shift to the worker, the social ramifications of the day labor system in the Delta allowed the landowner to continue to hold ultimate power. James E. Thweatt noted in his memoirs:

The "day crop", Mr. Hopson's land farmed by day labor, as well as the tenants land always produced more cotton than they could pick before bad winter weather set in. So every Fall Mr. Hopson would import one or two truck loads of Mexicans from along the Rio Grande. There would be twenty five or thirty on each truck, some entire families, and many single men. Most of them did not speak English, but the truck driver could and he was responsible for each person on his truck. They would be housed on the bank of the Sunflower River, which was for bathing and other bath room use.13

Even during a labor shortage, plantations found ways to import foreign labor. And for domestic wage labor, long commutes for daily work were possible. A study from 1938 found that newly-paved roads allowed day laborers from Memphis to be driven daily to plantations 35 miles away from that city.14

Wage labor was also possible because cotton’s main production phases were seasonal. Based on latitude and climate, the typical planting dates for cotton in the Delta states were from late April to late May, with the harvest taking place from October to early November. The power relationships of landowner and sharecropper in the Delta were extremely tilted in favor of the owner, and this power structure extended to the market: the landowner decided where sharecropper-picked cotton would be ginned (often

14 See Taylor (1938). These far distances of labor travel were rare in the region (particularly because of the overwhelmingly high percentage of unimproved roads), but the ability for modern, quality infrastructure to link Memphis to nearby counties foreshadowed the post-1950s suburbanization of the Delta’s only national-class city.
at a cotton gin owned by the landlord.) In some cases, ginning practices and weighing were corrupted against the sharecropper, who himself had little recourse.

This power manifested itself in ways other than in the fields: for example, in reaction to the great 1927 Mississippi River Flood. In many plantation districts near the river, the actual relief supplies were given in bulk to the landowners, who would then control distribution to their farm workers and sharecroppers, handing out relief at a rate and quantity as the landowners so chose. While the bizarre economic situation of even governmental aid being managed by private interests – private interests who were the direct employers of those seeking relief – seems atypical of federal-run programs in the South in a wider Progressive- and Depression-era context, Hendricks notes that these actions were explicitly done “so as not to challenge the plantation system.”

Woodruff described the situation of power imbalance, nothing that “in the alluvial empire, planters controlled all levels of government: federal, state, and local.”

Eventually, widespread day labor practices declined, not only because a less-labor-intensive form of cotton harvest mechanization, but also because of the extension of minimum wage law to most agricultural workers in 1967. After this point, cotton field owners had an economic incentive to eliminate as much manual labor as possible, since wage workers’ payroll expenses would be continuously higher than the rate in a pre-minimum wage Delta. Post-1967, market forces on farm worker incomes were irrelevant, so mechanization increased precipitously.

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17 Woodruff (2003), p. 3.
Day identified the transition from hand-picked labor to mechanized agriculture as a two-step process. The first step incorporated some mechanization of pre-harvest tasks and a hand-picked harvest, which Day argued occurred in the South largely during the 1940s. The second step involved full mechanization of the harvest time, seen in the cotton world by penetration of mechanical cotton pickers throughout the 1950s and 1960s.19

Day also noted that this first “stage” of pre-harvest-only mechanization led to an imbalance of labor inputs throughout the year. As cotton harvests were still completely hand-picked, farms required mass labor to be hired for picking alone every fall. As the sharecropper system was already in decline due to the crisis of the Depression and its associated effects on tenant debt, cotton prices, and so forth, cotton farms had experimented with wage labor hired by the day. According to Sargen, the hand-picked labor harvests of the 1940s created exceedingly high demands for wage labor, largely met by “a combination of resident wage labor and hired labor from nearby villages…”.20 In this situation, farms that were located near larger towns (and thus larger pools of potential harvest labor) were better situated to produce cotton using less labor costs.

Wage labor, which could be hired and fired and rehired without any long-form of contract or land arrangements, helped to reshape the meaning of a “farm” or “farmer”. The 1940 Agricultural Census noted this difficulty, writing that “…with the coming of the boll weevil, Negro migration, hard times, low cotton prices, tractors and power machinery, and mechanical cotton pickers, the tendency has been away from the simple

19 See Day (1967) for a fuller explanation of this transition.
cropper system to wage hands or a complicated share system, and this has made it more difficult to define a farm so that it could be satisfactorily enumerated and tabulated.”21

Further economic control of farm workers by planter bosses came from restricted movement within various temporary relief housing: many sharecropper evacuees were only “released” from the federal relief camps into the care of their respective plantation landowners, who were afraid that indebted sharecroppers would not return to the farms after the flood.22 With a crop that required mass labor to hand-pick cotton during an era of already-depressed prices for cotton, a labor exodus simply could not happen.

An additional characteristic of labor in the Delta south was the existence of a traditional financial system. Specifically, the plantation structure brought about a region that lacked financial institutions or transactions with mature, connected, or transferable credit systems. Dockery Plantation, an enormous site in Sunflower County, Mississippi that once employed 2,000 workers and covered over 10,000 acres, paid its workers in plantation-made coins.23 These coins could then be used to purchase items sold at locations on the plantation grounds only (or, in some instances, used to purchase items at the plantation, or from a few select merchants in a nearby town.) This system of plantation-specific scrip or coins as payment was extremely detrimental to efforts to move the Delta into a mature financial economy. Currency with a small geographic bound meant that its holders (Dockery’s cotton workers) lacked purchasing power. Without money to purchase, and without purchased goods to collateralize, growing a

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22 Hendricks (2011) further notes that African-American workers in particular were required to have a pass to enter or exit any of the various relief camps set up by the Red Cross.
savings account or accumulating credit or loans from actual financial institutions was nearly impossible.

Economic control was coordinated by the on-site commercial apparatus of a plantation, including the “commissary” store. At a commissary, tenant farmers and their families used credit to purchase the various tools and goods needed for the upcoming year from the general store-like commissary on the plantation grounds. Be it from poor crop harvests or unscrupulous commissary management, tenant farmers often increased debt each year, perpetuating a cycle of near-indenturedness during the early twentieth century. Although many of Hopson’s employees during the 1940s were hired as “day labor” and thus avoided the need to have yearly purchases on credit, the commissary still held the central position of bank-and-store hybrid for area tenant farmers.

The financial Delta was not entirely insular: there existed some degree of wider geographic linkages to extraregional capital or firms: Sunflower Plantation, Mississippi was originally bought and developed by the Taylor & Crate Company of Buffalo, New York in the late 1880s. And another Buffalo-based company, Goodyear Lumber, developed the massive lumber town of Bogalusa, Louisiana in the 1900s and 1910s.

Another traditional financial arrangement in the Delta (as well as the broader American South) was the crop-lien system, where farmers would use the value of future harvests as promissory to be able to gain credit to pay for necessary expenses. A local merchant (the “furnisher”) would sell goods, seeds, and other necessary supplies to a

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24 Hopson Plantation near Clarksdale, Mississippi managed to play a strong financial role for all workers, particularly those who were tenant farmers on Hopson’s land, through the existence of the commissary. http://sunflowerplantation.blogspot.com/p/sunflower-plantation-photos-1936-1939.html
farmer on credit; the farmer, with little cash or savings, would then put his upcoming year’s crop up as a collateralized asset against the debt. In theory, each year the proceeds of a farmer’s cotton harvest would pay off the debt owed to a merchant. In practice, however, dips in cotton prices and inordinately high interest rates of repayment meant that in many years, the farmer could not pay back all the debt with a single harvest. Many tenant farmers became trapped in an increasing cycle of debt. Though more prevalent from the late nineteenth-century “New South” era until the Great Depression, rather than in the period from 1930 to 1970, the crop-lien system represented the dominant type of financing for most farmers in the Delta in the early twentieth century.

Gisolfi analyzed the shift away from the crop-lien system towards contract-based farming in Georgia in the 1930s, identifying that production methods were also changing from labor-intensive production methods to a more capital-intensive process. In an agricultural world whose implements and improvements required up-front payments, cash, rather than merchant-based credit, was increasingly imperative for farmers. Yet for the vast majority of pre-1930s Delta farmers, living in a cycle of constant accumulated debt to local merchants, the cotton crop-lien system robbed farmers of their agency, limiting experimentation, diversification, or entrepreneurial activity. Gisolfi succinctly summed up the effects of the crop-lien system, writing “farmers did not choose to grow cotton year after year; rather their creditors required them do to so.”

Many have shared this pessimistic view of crop-lien as a systemic roadblock, standing athwart better financial practices that would move cotton into a mature

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28 See Clark (1946), Ransom and Sutch (1972), and Hahn (1985) for more detailed histories of the crop-lien system in practice across a broader U.S. South, with particular nineteenth-century focus.
economic system. And it is true that this system, when paired with the plantation-produced currency systems, led to a dearth of developed capitalism in the Delta.

However, in many ways, this system was not anomalous among the other economic and social systems discussed in this research; the Delta, and in some instances the South at large, faced many disadvantageous hierarchies and structures, so the absence of freer labor or credit systems ought not to be surprising. Woodman argues against crop-lien’s somehow planned role in a sustained white supremacy. A better approach to understanding this merchant-farmer relation is to consider that after emancipation, there was little (if any) ability for complex labor systems to exist; Woodman continues that “emancipation destroyed the slave social system without automatically creating a new free labor system in its place.” The real motivation for the evolution of crop lien laws, cash cropping, or share cropping, was not a continuance of the slave master past, but rather a necessity of capitalism in a world without capital structures.

Somewhat related to the cycle of accumulated debt present in most crop-lien systems was the reality of another economic control: debt peonage. This was a type of debt labor system where a worker was forced to pay off a debt by working the creditor’s land. In theory, peonage is a type of slavery, and has been illegal under federal law since the Reconstruction era; in practice, peonage arose in many instances across the South throughout the first half of the twentieth century. In rarer situations, individuals who

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30 Past historiography of the crop-lien system has taken a particularly negative view of its social effects. Woodman (1995) noted that the crop-lien system was seen “as part of a merchant conspiracy that forced former slaves into a slave-like social system, led to increasing tenancy among whites, and locked the South into almost a century of grinding poverty and economic stagnation.” p. 1.

31 Woodman (1995), p. 4-5, 7. A majority of Southern states – Mississippi, Alabama, Florida, Louisiana, Georgia, North Carolina, South Carolina, and Texas – enthusiastically passed various agricultural acts and lien laws between 1865 and 1867, in order to encourage the re-development of agriculture for economic means, not as part of a conspiracy of social control.

32 For more on peonage, see Woodruff (2003).
owned no debt to a particular landowner, such as a recently arrived foreign immigrant, were “pressed” into agricultural work in the fields as well.

Some of the more notable Delta-region cases of peonage included the failed colony of Sunnyside Plantation in Chicot County, Arkansas, in the extreme southeast corner of the state. As the colony faced tough times in the 1890s, more than 100 Italian immigrant families were forced to work in a state of virtual debt bondage on the land. Through contacts in government, the Department of Justice investigated in 1907, but because the powerful Mississippi planter LeRoy Percy owned and leased the land at Sunnyside, no formal charges were ever brought against the farm. In a sign of the social power of the cotton hierarchy, LeRoy Percy was appointed as one of Mississippi’s two U.S. Senators in 1910. Razer identifies egregious cases of Delta peonage, including a case that occurred at Earle, Arkansas, where local blacks were arrested for “vagrancy” and impressed into the fields as labor, and another case where three dozen black families were forced to work on Poinsett County farms under the watch of armed guard.33

And these labor arrangements were not unique to the Delta: systems of labor control varied on cotton plantations across the globe during the nineteenth and early twentieth centuries. For example, a 1909 report by the then-named U.S. Department of Commerce and Labor that issued a report about forced labor on cotton plantations in Mexico, enforced by Mexican police. Because cotton was a world crop, the economy of cotton was subject to dynamic changes in the world market. Beckert called these associated debt arrangements “extra-economic coercion.” 34 Labor systems similar to Southern crop-lien systems (and likely based off of Southern systems) also existed in

33 Razer (2010).
India, Egypt, and Central Asia. Even more global systems of labor control in wider
cotton production spheres included Egyptian systems of debt peonage, and the associated
effects of colonialism on labor in India.\footnote{Beckert (2005), p. 56, 59. Egyptian and Indian cotton labor systems “borrowed” such labor controls
ideas from the cotton American South.}

A final clear economic control popular in Delta society that was associated with
gross institutional illegality was the convict-lease system. Across the South, prisons
would lease masses of prisoners to a particular farm or plantation; the prisoners would
then be under the care control, and guard of the plantation. Most prisoners were African-
American, and most historians agree that minor crimes (whether justly prosecuted or not)
could lead to this penal labor system just as well as more major crimes. Convict-lease
was most popular during the late nineteenth century, although some forms of this system
extended in Delta states until about 1910. Blackmon describes this process broadly as
“...the arrests, subsequent sale, and delivery of thousands of African Americans into
mines, lumber camps, quarries, farms, and factories.”\footnote{Blackmon (2008), p. 6.}

Because the leasing of convicts
was a business transaction, corruption was rampant. Such “leased” work was not limited
to plantations. Coal mines and railroad building sites also were common work
destinations for convicts forced in this program.

In a wider sense, the economic controls of the Delta South before 1930 or 1970
ended up continuing a traditional, mass-labor, hand-picked, cotton-based way of life,
where a defined hierarchy of a planter elite made economic mobility for the poorest in
Delta society nearly impossible. Yet, this lowest “rung” of farm workers, both black and
white, was not passively resigned to this fate; there were moments of resistance and
organization by farm labor in the Delta, usually centering on some sort of union activity.
The Delta had been home to economic activism before. The National Grange was active in Arkansas after its local branch founding in the Mississippi-River-bordering town of Helena in 1872, and the national Agricultural Wheel was established in Prairie County, Arkansas in 1882. Additional organizations related to economy and labor included the more tradition union groups such as the Knights of Labor.\textsuperscript{37} This is noteworthy as the Delta South in particular has a long cultural history of opposition to unions, or even pure anti-union sentiment, in its politics. All Delta states (along with all Southern states except Kentucky) are “right to work” states, with some Delta “right to work” laws passed immediately in the wake of the Taft-Hartley labor laws of 1947.

But in a more specific sense, one of the most important moments of resistance was the Southern Tenant Farmers Union, discussed in Chapter 4.\textsuperscript{38} The union, founded in 1934 as a reaction to landowners’ failure to share in the promised payments from the Agricultural Adjustment Administration, lobbied for better working conditions and economic arrangements for tenant farmers. While the Union did not achieve its immediate goals during the Depression Era, its most revolutionary stance was its admittance of both black and white tenant farmers alike. The STFU argued that blacks and whites were both able to coexist in a large Delta landscape of farming. This agricultural and labor organizing “integration” terrified the white elite planters of the time, and these local leaders ruthlessly quelled any protests.\textsuperscript{39}

\textsuperscript{37} Federal Writers’ Project (1941), p. 66.
\textsuperscript{38} See Grubbs (2000) for an excellent treatment of the Southern Tenant Farmers Union.
\textsuperscript{39} In retrospect, the rejection of the STFU in part \textit{because} of its racial integration are clear signs of an economic system imbued with race and society. Smith noted that a “negative fact about Arkansas society – one that was clearly shown during the state’s fight with the Southern Tenant Farmers Union between 1934 and 1940 – was that human sufferings were of little consequence when economic profit was to be gained.” Smith (1978), p. 111.
6.2 Social Controls, Race, Political Ruralism, and “Sundown Towns”

“American school students tend to learn two things about the South: the Civil War and the Civil Rights Movement.” So wrote David Davis in 2011, echoing a common sentiment of a general Southern concept of “memory”. This idea of the South as central to the great American morality play of ending slavery and (progress towards) black equality is no doubt important, but it ignores a larger context of social controls that dominated everyday life in the South in the century after Emancipation. These controls, sometimes race-based but also income-based, were especially marked in the agricultural Mississippi Delta region, as powerful cotton-enriched elites maintained order and stability through a variety of institutionalized, legal, or societal measures. By the 1970s, a number of factors, including outmigration of rural farm workers and the decline of rural political power in American electoral processes, had combined to break up these initial social controls of the once-powerful cotton farming leaders.

Delta society had a clear stratified hierarchy even without factoring in race; with it, a new “lowest rung” on the agricultural ladder was added. Moreover, the farm was the only choice for many: in 1930, 67.7% of all men in Mississippi worked in agriculture, but that percentage rose to 77.1% for black men in Mississippi. Limited economic opportunities kept black workers in agricultural jobs. The economic evidence of a racially stratified society is evident: the average white farm operator in Mississippi in 1930 had a farm 86.7 acres in size compared to just 33.2 acres for the average black farm operator in Mississippi at the time. In a true Delta county, Bolivar County, Mississippi, those numbers shifted downward to represent the average small parcels, with the white

40 Davis and Vanderhoek (2011).
and black measures just 54.4 acres and 19.8 acres, respectively.\textsuperscript{41} Wages, savings, and so forth all suggested worse economic indicators for blacks in the Delta than for whites. Nan Woodruff’s seminal work, \textit{American Congo}, rightly paints a similarly pessimistic image by comparing the development of a postbellum Mississippi Delta to the worst of African colonialism.

The systemic economic ceiling of black laborers’ job opportunities negatively impacted all other economic concerns. According to de Jong, the reality of the rural South was that the day-to-day struggle of securing wage earnings trumped all other social concerns, as she notes that “black workers did not need to formulate sophisticated theories about racism as a form of labor control to understand why employers seemed determined to pay them barely enough to survive.”\textsuperscript{42}

In some ways, this race-based economic situation was not \textit{necessarily} preordained. For a brief period after the 1860s, freed blacks earning a wage held a position of (partial) economic power, however transitory and insignificant this power was in local communities. While the average income levels of black workers during this period averaged far below that of whites, the expected purchasing power of blacks throughout the South was noticed by northern and southern merchants alike.\textsuperscript{43} Woodman describes the real determination of northern business to earn substantial profit from this “new and lucrative enterprise” of retail sales to southern blacks.\textsuperscript{44}

And, for a brief moment (typically before 1910), African-American farmers in the South owned their own farms at a historically high rate. There was significant expansion

\textsuperscript{41} 1930 Agricultural Census, “Table 1: Farms and Farm Acreage.”
\textsuperscript{42} DeJong (2001), p.44.
\textsuperscript{43} Glymph (2008), p. 208.
\textsuperscript{44} Woodman (1968), p. 320-323
of land ownership by blacks within the rural South in the late nineteenth century, each successive decade after emancipation. The percentage of individuals who were full owners of their farms outright hovered between 42 and 43 percent from 1910-1925, with the percentage of tenants during that period swayed between 49 and 51 percent. Moreover, while white farmers owned their farms in greater percentages than black farmers, nearly 20% of Southern black farmers during this period (representing about 170,000 individual black farmer head of households) owned their land and farm outright.

Methodologically, a problem with a greater understanding of African-American land parcelization on an individual level stems from the general lack of historical scholarship on this important topic. In a published interview, historian Mark Schultz remarked on this topic, “Right now there's only one book that examines black farm-owning as its primary focus... Nearly half a million black families owned their own farms in 1910, 1920 – one book so far dedicated to this whole experience. This is a quarter of all black farmers. This is a story that's been absolutely ignored for a long time.” The racial divide of the agrarian African-American even appears within historical data and historiographic interest.

Tenant farming and sharecropping were “especially harsh” for blacks because the system was mixed with, as Ward and Butler note, “an equally oppressive and exploitative

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46 That little structural change regarding farm tenancy occurred during these reporting periods from 1910-1925 gives more credence to my definition of how precisely to temporally bound the “New South” beyond the end of World War I.
47 Mark Schultz serves as the director of Lewis University’s oral history project “Breaking New Ground: A History of African American Farm Owners Since the Civil War,” which aims to document the experiences of black landowning in the early twentieth century through interviews with elderly black farmers in Mississippi, in conjunction with the University of Southern Mississippi.
social system of segregation.” Segregation was apparent in all sectors of Delta society. In mid-twentieth-century Clarksdale, Mississippi “blacks could be arrested for walking down the street that ran by the white-only swimming pool or for being out after midnight.” However, of particular interest is the violence associated with race-based social controls. Mappings of the geographic locations of lynchings in the pre-Civil Rights South suggest patterns of racial violence within the Delta states. In Mississippi and Louisiana, there was a large pocket of lynching violence outside of the Mississippi River Delta (the edge of the “black belt” in east/northeast Mississippi and the northwest Louisiana area around Shreveport, respectively). However, a large continuous band of lynchings appears near settlement along the Mississippi River, and “the Delta” core, in Louisiana, Mississippi, Arkansas, and Tennessee. In addition, while not as violent, social power was exhibited in other arenas, as many blacks were expelled from Ozark Mountain towns west of the Mississippi River in the 1890s and 1900s.

Uprisings occurred, though they were not common: during the “Red Summer of 1919”, Delta state race riots took place in Monticello, Macon, and Hattiesburg in Mississippi; Memphis and Knoxville in Tennessee; New Orleans, Louisiana; and perhaps the most massive race riot in the Delta in Elaine, Arkansas. Other unrest occurred in sporadic moments, usually related to the Depression, such as the “England Food Riot” in England, Arkansas in 1930.

Yet there were positive social communities: Clarksdale, Mississippi’s 4th Street (now Martin Luther King, Jr. Street) was the center of mid-century African-American

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culture in the city.\textsuperscript{52} Flynt argues that the rural church, among both white and black residents was “arguably the most important stabilizing social institution within the plantation district,” and the rural church had especially important meaning and power within black agricultural communities.\textsuperscript{53} As well as racial differences, it should also be noted that a tremendous gendered division of labor existed in the daily economic life of the Delta. In terms of wages and income, overall retail jobs in 1930 were populated by a workforce that was 75\% male in both Mississippi and Arkansas, two of the top three highest rates of male concentration in the nation.\textsuperscript{54}

In the midst of this endemic racist social structure, it might seem that federal government intervention could be a panacea for these problems; however, Washington generally failed to address such rampant racial exclusion and separation policies, even during a hyper-activist era during the early New Deal from 1933 to 1935. For example, at Dyess, a New Deal-era planned “resettlement community”, the residents – who also earned wages building the town – had to be under fifty years old, in good health, and white.\textsuperscript{55}

Moreover, as noted in Chapter 3, Daniel described the interventions of the U.S. Department of Agriculture in combating the boll weevil as a major moment in governmental authority into the agrarian cotton world. However, he further explains the racialized details and the caste-like existence of the fight: black agricultural extension agents worked with local farmers, both black and white, much to the chagrin of local whites. To balance the delicate situation, government extension agents of any color

\textsuperscript{52} Rutkoff and Scott (2005), p.146
\textsuperscript{53} Flynt (1999), p. 355.
\textsuperscript{54} “Table 5B: Proportion of Men and Women Workers, By States.” Census of Distribution. Retail distribution. Special series. Employment and wages in the retail industry, p. 46, 1933.
tended to help only the richer planters, avoiding the sharecropping class. Daniel summarized, “Thus, the bottom strata of both races faltered before the weevil, just as they had under other natural and manmade calamities.”

The Civilian Conservation Corps, the construction and conservation employment wing of the New Deal, also had strict racial rules. As the Plantation Agriculture Museum noted, “If the CCC had a flaw it was in the area of race relations.” Just 200,000 of 2.5 million total enrollees in the CCC were black, and these ratios were more extreme in the South. In 1939, out of 934 recruits for the CCC in Arkansas, just 20 were black. Out of all the CCC sites, there were just five black camps in the state. In 1935, the city of Warren, Arkansas prevented a “black” CCC-affiliated company from replacing a “white” company. In the same period, Hamburg, Arkansas blocked the construction of a black CCC camp in its boundaries, even though this federal location would bring more tax dollars to the city.

The cotton Delta was simply not a great magnet for foreign-born immigrants; the vast majority of residents were “native-born”, with most born in the South. There were pockets of “outside” ethnic or cultural groups that played important roles in the Delta, such as the Jewish community of Quitman, Mississippi, but overall, the cotton Delta was overwhelmingly native-born.

57 Plantation Agriculture Museum, exhibit August 2010. Poster. “If the CCC had a flaw...” Scott, Arkansas.
58 None of the six Mississippi River bordering counties in east Arkansas was among the top 15 Arkansas counties (or top 20%, out of 75 total Arkansas counties) in percentage of population foreign-born every census year from 1880 to 1930. Only Chicot County, with its historic Italian-dominated colonies including Sunnyside Plantation, appears at all as a top 15 foreign-born county during any of the censal years. The numbers were extremely low: in 1930, Lee County, Arkansas had a population of over 26,000 residents but only 45 persons were foreign-born.
The Delta was also a place of persistent segregation, into the latter half of the twentieth century. The public school system of Yazoo City, Mississippi was not integrated until 1970. About the same time as forced integration was finally “accepted” by Delta school systems, a new type of institution arose in the South: the private school, or segregation academy. The academy system brought a new geography to the urban form of small Delta towns. In contemporary Marvell, Arkansas, Marvell High School, the public school, is overwhelmingly black, while Marvell Academy, the private school founded in 1966, is overwhelmingly white. Both schools are less than one mile apart.

Another idea of “persistent” social controls would be the concept of limited social mobility. Tracking exact surnames through time and space is extremely difficult (and unlikely, due to the requirement of each generation having a continuous line of males to carry on the surname.) However, comparison of late antebellum Mississippi River plantation maps finds that a particular surname (Nelms) of northwest Mississippi slave-based plantations have stable descendants that end up living in Memphis during the first third of the twentieth century. While Nelms becomes a farmer, and is obviously less ‘powerful’ than the antebellum Nelms, social mobility is difficult when the same families are in the same towns – even without occupying positions of power – for 150 years.

The “race issue” was long a ubiquitous question in Delta state-level political campaigns. Additionally, the combination of low black voter registration, outright legal barriers to black political participation, and the consistent near-one-party state throughout the Delta meant that any statewide electorate would be overwhelmingly white. In 1948, the election of the Democratic Primary for Governor in Arkansas devolved into attacks

59 Along with many African-Americans with surname “Nelms” and birthdate presumably evidence of a slave owner “taken” or “assumed” surname.
on a young reformer candidate, Sid McMath, by a full-page advertisement in the statewide paper, declaring “SID: ANSWER THESE QUESTIONS.” A listing of a dozen questions, mostly related to race, included “What deals have you made with negroes for the negro vote”, “How many negroes have you promised to put on the police force?”, and “How many negroes have you promised to put in the state department of education?” were stated.⁶⁰

A recent emergence in historical scholarship of race has been the (sometimes controversial) uncovering of the so-called “Sundown Towns” by James Loewen. From the 1890s until the modern Civil Rights Movement of the 1960s, thousands of communities across the United States harassed and eventually drove out the black citizens living in those communities. The name “sundown town” comes from the concept that blacks were sometimes able to work in these cities, but were socially forbidden by threats of violence to live in these places, and thus had to leave town each day by sundown.

These communities were often demarcated by a crude sign at a town’s border (an example sign on the edge of Alix, Arkansas used the common racist phrasing – “Nigger, Don’t Let The Sun Go Down On You in Alix”).⁶¹ However, the vast majority of these Sundown Towns were located beyond the traditional post-plantation landscape associated with the Delta South (Figure 6.1). Primarily an artifact of the Midwest, or the mountainous Ozark or Appalachian South, the Sundown Town phenomenon did not

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⁶¹ See Loewen (2005).
Figure 6.1: Identified "Sundown Towns" in Delta states, submitted by users to James W. Loewen, data copyright 2010.
stretch to the heart of the Mississippi Delta or Alabama’s Black Belt, likely because of the economic importance of black workers to those local economies.\(^6^2\)

As a result, mobility was limited for Delta black persons, since potential migrants could not live in a factory town with available jobs if the town was a “Sundown Town”. The reality was that economic choices were limited, so local black residents were “stuck” with cotton production jobs, no matter how disadvantageous the economic effects. Not until mechanization and post-World War II industrialization did millions of Delta African-Americans seek (and find) better economic opportunity in the North.

A final specific note is the decline of rural power in the Delta states and beyond. Before the 1960s, states were free to allocate state senators by geographic boundaries, not population-related boundaries. That is, states could require an upper house of one state senator from each county (in opposition to a lower house with representatives elected by population.) This system mirrored the United States Congress, but it also had an advantage for the Delta core, as the mostly rural Delta would receive more representation in their respective state legislatures. Furthermore, before the passage of the Seventeenth Amendment in 1913, state legislatures were responsible for selecting U.S. Senators. Depending on the makeup and count of state representatives and state senators, a state senate with a senator-per-county could result in the legislative election of a U.S. Senator that was wholly picked by rural agricultural interests.

During the 1960s, a series of Supreme Court cases challenged, and eventually overturned the geography-determined state senate districts. In 1962’s *Baker v. Carr* and in 1964’s *Reynolds v. Sims*, state legislatures were overruled, and districts of equal

\(^{62}\) For more information, see Loewen at http://sundown.afro.illinois.edu/sundowntowns.php
population in a state house and senate were subsequently required. Thus, the balance of political power in the states shifted from the rural places to the urban places. Illinois Senator Everett Dirkson warned specifically that if *Reynolds* were not remedied through a Constitutional Amendment, “six million citizens of the Chicago area would hold sway in the Illinois Legislature without consideration of the problems of their four million fellows who are scattered in 100 other counties.” While Dirkson’s argument would apply to the Delta states at a much slower pace, it was true that the overarching political power of the rural Delta was gradually crumbling away.

A related disadvantage to the sharp decline in Delta-region populations was the corresponding loss of political power in Congress. In successive decennial apportionments after World War II, Delta states lost congressional seats, and states redrew congressional boundaries, which often diluted the ability for a district to represent the cotton core counties exclusively. In both the 1950 redistricting and the 1960 redistricting, the combined greater Delta region lost a total of five congressional representatives: Mississippi lost two seats, and Arkansas lost three seats. By 1970, the congressional losses had stopped, but it was clear that the cotton Delta possessed far less direct political power than it did in 1930.

The Delta’s oversupply of labor, lack of complex credit systems, destructive economic arrangements (including debt peonage, crop liens, and the convict-lease system) maintained a regressive, planter-dominated cotton economy while surrounding

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63 This question of geographic representation is an interesting one, because it discussed the right of a state to decide how its own senate is selected, and the Court invalidated the same method the U.S. Senate seats are allocated on a national level. The case was uniquely difficult to decide for these very points, and it was reargued before the court, and deliberations over the “correct” decision likely led to the illness and resignation of Justice Charles Evans Whitaker.

64 Holley (2000), p. 192
regions experienced system economic maturation during mid-century. Conversely, the social systems of (usually race-based) control eventually broke down as the laboring underclass left the Delta. These economic and social controls were the human layer of radical regional change in the Delta, joining mass migration, economic development attempts, cotton production changes (after the realization of comparative disadvantages of production), and global cotton production shifts. By 1970, the Mississippi Delta region had changed for good.
Chapter 7: Conclusion

In December 1923, Mississippi A & M College (now Mississippi State University) hosted a “Conference of Agriculture and Industry” at Starkville, Mississippi. The invited speakers formed an eclectic group from a variety of backgrounds and industries. The conference did little to change the future of the Delta; transcripts of their back-and-forth discussions have been lost to history. What is remarkable about the 1923 conference was that its agenda – of both concerns and solutions – reads much like the table of contents for this dissertation. Lectures included “an efficient farm program...”, “the relation of merchant to agriculture and industry”, “the state department of agriculture and its allied boards...”, “the railroad as a factor in agricultural and industrial development”, and “the banker and his obligations as an economic factor in state development”. Even the printed slogan for the conference, “if you can’t make a [cotton] bale on five acres, make it on one and grow another crop on the other four”, was a call for crop diversification away from cotton.¹

Many in the 1930s Delta knew that cotton agriculture could not sustain the region’s economy and society forever. Some changes, such as the rise of cheaper global cotton sources and export markets (particularly during the 1950s and 1960s), and the production gains of cotton belts in the U.S. Southwest and Far West, were apparent to those with an understanding of comparative economics and wage systems. Other changes, such as the widespread adoption of a usable, efficient mechanical cotton picker, were seen as hopeless dreams that would never come to fruition.

This research has broadly tackled the changing landscape of cotton production in the Mississippi Delta region, as the Delta cotton belt transformed from an area of comparative advantages aiding cotton production before 1930 to an area of comparative disadvantages hindering efficient cotton production by 1970. Previous chapters have demonstrated the effects of ascendant global and non-Delta U.S. cotton production upon the Delta’s cotton industry; the specific comparative disadvantages of Delta cotton production after 1930; the failure of economic development in the Delta cotton core in an era of increased government control of cotton agriculture; the Delta’s urban growth beyond a depopulated cotton belt; and the systemic economic and social controls (often race-based) that were implemented upon Delta cotton labor.

These forces – both external pressures and internal reactions to those national and global economic changes – engendered radical change in the Delta from 1930 to 1970. Results included outmigration of rural cotton laborers, a pattern of accumulation of land parcels into larger agribusiness-owned plots instead of smaller (owned or rented) family farms, and the economic and population decline of urban places (larger and smaller towns) in the Delta. Technology (the mechanical cotton picker) and market forces occurring at wider scales (the rise of cheap global cotton production) also aligned to hasten the decline and fall of a once-significant cotton empire.² In this chapter, the Delta after 1970 is examined. The endpoints of these major mid-century changes by the early 1970s signal a fundamental regional remaking, as defined by many broad processes:

² From 1960 to 2001, cotton production doubled in India and tripled in China. During the same period, while American cotton production remained strong in terms of total yield, its share of global production fell by half, to about 20% of world cotton production by 2001. By 2004, the largest cotton producers in the world were China and the United States, but also India, Pakistan, and Uzbekistan. See Baffes (2004), “Cotton: Market Setting, Trade Policies, and Issues.” World Bank.
Increased urbanization resulting from rural population shifts\(^3\)

High levels of government-funded infrastructure and investment\(^4\)

Increased removal of legalized, institutional racism\(^5\)

Modern political processes\(^6\)

Post-plantation/post-tenant farming agricultural efficiencies\(^7\)

These and similar processes collectively describe the many moments of rural-based regional economic change within a specific Delta Southern context: nearby economic growth (and continued core stagnation) amidst the region’s legacy of plantation agriculture, land tenure, ruralism, and social traditionalism. The dense agrarian tenant-farmer-dominated Delta disappeared by 1970, and this depeopled – but still rural – Delta continued. These more recent moments of change after 1970 are not evidence of different processes altogether; instead, the regional damage was complete by 1970 – the Delta was economically dying, and structurally, it was impossible to reverse this downward trend. In short, studies of the Delta after 1970 are simply measuring the degree of an already-occurring regional decline.

While the regional economic, social, and urban processes have displayed a variety of small-scale effects in different ways, the historic cotton core of the Mississippi Delta in 1970 was not merely a “less powerful” region than it was during its early twentieth-century past. Rather, it was – and is – a region in an indisputable state of economic

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\(^3\) Mississippi rose to 44% urban population and Arkansas rose to 50% urban population in the 1970 census.

\(^4\) The U.S. Army Corps of Engineers managed projects for channelization of Louisiana’s Atchafalaya River in the 1960s and the Kerr-McClellan navigation system on the Arkansas River, completed in 1971.

\(^5\) Political participation of Delta black voters increased in the late 1960s and early 1970s with voter registration drives. The “White Primaries” of the Democratic Party, though legally outlawed by the 1944 Supreme Court case *Smith v. Allwright*, continued as state- and local-level systems kept black voter participation to a minimum until the late 1960s. See Hine (1977) and Weeks (1948).

\(^6\) The end of party-boss politics and a one-party system as television political campaigning and the beginnings of a viable southern Republican Party took hold in the 1970s.

\(^7\) Over 95% of Delta cotton was mechanically picked by 1970. See Sayre (1979).
decay. The spatial, economic, and human geographies of the multi-state region of Louisiana, Mississippi, Arkansas and western Tennessee shifted radically.

These economic changes are not localist in nature; Delta changes occurred in reaction to national and global forces. However, this research has investigated how reactions to these larger forces transpired locally, as former comparative advantages of cotton production (such as the tenant farming system) became distinct disadvantages in a wider, more mechanized world of cotton production. This dissertation has incorporated insights from the local scale of the farm to the global scale, analyzing the changing economic geography of cotton production during the middle four decades of the twentieth century.

This chapter tackles three expansive ideas. First, the Delta cotton landscape after 1970 will be examined, giving insight into the continuation of a depopulated poverty-stricken commercial agriculture-dominated landscape (increasingly aligned towards soybean and rice production) that developed by 1970, as cotton belts in Asia and the U.S. West dominated the world sphere of cotton production. Second, changes in the geographies of cotton agriculture are seen in the economic rearranging of the Delta from hand-picked traditional cotton agriculture to large-scale mechanized agriculture. These new spatial arrangements allow for the development of a general model of rural-to-rural economic change. Finally, future strands of related research, as well as the ultimate implications of this dissertation, will be addressed.
7.1 Persistent Poverty and the Twilight of Small Delta Cotton Farms

This section allows for a contextualizing of the post-1970s world of Delta cotton amidst other developing national and global zones of cotton production. In essence, this examination allows a view of the recent Delta, not as a travelogue, but as an endpoint of rural-to-rural agrarian economic change. Perhaps the most sweeping geographic change in cotton farming has been the increase of large commercial farms as the dominant spatial model of agricultural production, rather than the small family tenant farm that was dominant in 1930. After 1930, the trend of the average Delta cotton farm increasing in size year after year continued. Farm size increase was not solely a characteristic of cotton agriculture; broader national trends in increased farm sized occurred as mechanization allowed for greater yields on more acres using less labor and fewer costs.\(^8\)

The last special cotton census of the United States was conducted in 1969. Particularly after 1970, while the wider cotton Delta region continued its decline, and after millions of cotton laborers left the fields to work elsewhere, an efficiency revolution was occurring specifically among cotton production. While the region dedicated fewer and fewer acres towards cotton production, the region continuously produced more bales of cotton. This paradox of less land yielding a greater harvest is borne out in many statistics. In 1969 in Mississippi, 1.2 million acres of cotton fields yielded 1.4 million bales of cotton; by 1997, less than 1 million acres yielded 1.7 million bales of cotton (Figure 7.1). This decline of land devoted to cotton production was not a uniquely post-1970 trend.\(^9\) Massive declines had been occurring since World War II and mechanization in the 1940s and 1950s. The total number of Delta cotton farms in 1970 was far less than

\(^8\) The U.S. Census of Agriculture published a report on “Large Scale Farming” for the first time in 1959.
\(^9\) Prunty and Aiken, p. 286-288.
in 1930, a decline related to structural changes such as the rapid adoption of the mechanical cotton picker and outmigration during the 1950s. Larger farms were able to survive more efficiently, and subsequently acquired smaller farms.

Simultaneously, many farmers holding smaller cotton farms were enthusiastic sellers, as increasing economic opportunities beyond the Delta, for both black and white laborers, made those jobs more attractive than small-scale cotton production. In Mississippi, agricultural census records show a decline in the total number of cotton farms from 1930 to 1969, losing 270,000 of its 300,000 cotton farms (Figure 7.2). Total change between cotton farms in Mississippi in 1930 and 2002 was a 99.4% decline. A reversal of this trend, which would require the 1970 farms to split ten-fold into smaller parcels, simply will not occur given the mechanized mode of cotton production.

By 1970, the small, single-family cotton farm in the Delta was gone forever, even as less acres of cotton produced more total cotton bales. In 2000, the Delta produced nearly four times as many cotton bales per acre than 1930. Cotton agriculture in the Delta had transformed from a mass-labor hand-picked crop, to a mechanized, automated crop of fewer and fewer acreage owned by fewer and fewer individual farmers. Delta cotton is still an important economic product, and “upland” cotton is still important to American agriculture (Figure 7.3). Even as the Delta possesses higher bale outputs than the early twentieth century, the total acreage and total people involved in Delta cotton production declined by 1970.

\[\text{\footnotesize 10} \] The total number of Mississippi cotton farms fell to about 1,600 farms by 2002. The vast majority of farm consolidation, from about 280,000 farms to 28,000 farms, occurred from 1930 to 1970. 
\[\text{\footnotesize 11} \] In 2002, 1.1 million acres yielded 1.94 million bales; in 1930, 4 million acres yielded 1.87 millions bales. This inverse relationship of declining cotton acreage with increased cotton yield was not specific to the Delta. See U.S.D.A. “Usual Planting and Harvesting Dates for U.S. Field Crops.” 1997. Also see Prunty and Aiken (1972), p. 289-290. Prunty and Aiken explained the rapid decline of the Piedmont cotton region, finding that rural land-use designated as cotton farms declined to approximately less than 3% by 1964.
Figure 7.1: More bales, fewer acres: Mississippi cotton statistics, 1969-1997.

Figure 7.2: Total number of Mississippi cotton farms, 1930-2002.
A major change in agricultural production has been the rise of other land uses for other crop types. The Delta had long been home to cotton monoculture, but as cotton production ultimately moved westward to Texas and California (particularly after World War II) farmers found substitute sources of profit in other crops, especially soybean, but also rice and corn. Soybean and rice production were less labor-intensive, with greater potential profits, than cotton production. Likewise, average Delta farm sizes increased as only large, mechanized, commercial farms could profitably produce cotton. The era of small family cotton farms ended, changing settlement patterns through depopulation.

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12 Rice production in the Delta (outside of a large historical coastal Cajun rice cultivation zone in Louisiana) was virtually non-existent in Delta states until about 1902, when small-scale rice production began in Lonoke County, Arkansas, which rapidly expanded to become a core of rice production by 1910, covering a large pocket of land roughly between the Arkansas and White Rivers south of the 35th parallel. Surface (1911), p. 501-505.
Historical statistics of cotton production signaled a coming decline of Delta cotton. Writing in 1945, Welch and Miley noted the unfavorable future for American cotton: “...something definite and tangible will have to be done...even to safeguard the present unsatisfactory economic position of the cotton producer. The ever increasing competition of producers in other countries and the phenomenal increase in synthetic and substitute products for cotton in both the domestic and foreign market will no doubt complicate the cotton situation immeasurably.”¹³

In a cotton Delta with average acreages of less than 100 acres per cotton farm in 1930, the natural market forces of accumulation by 1970 should not be surprising. In the post-1930 Delta, soybean acreage increased, while cotton acreage declined. By the 1950s, soybean production in the Delta rose to the status of what Holley called “a major cash crop.”¹⁴ The dominance of soybean and rice cultivation in the Delta continues to the present.¹⁵ Rice cultivation increased so rapidly during the mid-1940s and 1950s that Arkansas has become the nation’s leading producer of rice.¹⁶ The replacement of cotton might have been surprising to mid-century residents, but agriculture and topography influenced shifts in cultivation: Williams argued a correlation “between clearing and drainage projects and an increase in soybean and rice production.”¹⁷ Changes in crop type were rapid. Williams also describes this shift in Arkansas: in 1945 cotton acreage outnumbered soybean acreage 4.5 to 1, the two crops had equal acreages in 1955, and soybean acreage outnumbered cotton acreage 6 to 1 by 1960.

¹³ Welch and Miley (1945), p. 929.
¹⁵ By 2002, Arkansas cotton production covered just 0.9 million acres compared to rice production of 1.5 million acres and soybean production of 2.9 million acres. The total number of Arkansas rice farms (3,573) and soybean farms (5,250) combined was more than seven times the total number of cotton farms (1,192). See 2002 Census of Agriculture, USDA. “Table 34. Specified Crops by Acres Harvested: 2002 and 1997.”
Cotton did not disappear as a crop by 1970; its production had simply shifted to fewer and fewer landowners.\(^\text{18}\) Technological advances meant that less labor and less effort were exerted in the fields to gain higher yields. The real change by 1970 (and beyond) is the spatial decline of cotton acreage relative to soybean or rice. Entire areas in the Delta, such as Mississippi’s Tallahatchie County and Bolivar County, were once defined by cotton (Figure 7.4). In 1930, cotton acreage outnumbered soybean acreage in Tallahatchie County by a ratio of 413 to 1. By 1970, crop diversification remade the county, and soybean acreage was more than double total cotton acreage. In 1929, nearly 72\% of Bolivar County – including land for roads, forests, rivers, wetlands, urban area, and so forth – was a cotton farm. Bolivar County cotton acreage was more than four times the entire soybean acreage in all of Mississippi. By 1970, cotton acreage declined 71\% while soybean acreage increased from 4,000 acres to nearly 200,000 acres.\(^\text{19}\)

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\(^{18}\) An agglomeration of small farms into larger sets of land owned by the same individual or business was in part a result of the favorable economies of scale associated with the mechanized farm era. Hart noted that “640 acres is not enough land to support even one modern family farm in the contemporary Midwest.” Hart (2001), p. 541.

\(^{19}\) “Table 5”, 1930 Census of Agriculture; 1969 Census of Agriculture.
The Delta cotton empire had collapsed by 1970 as other crops, from rice to soybean to a growing aquaculture industry, quickly replaced cotton’s spatial and economic dominance. Yet, because retreating cotton agriculture required far less labor to work the fields, the majority of residents who stayed in the Delta by 1970 were living in an impoverished region with little hope of economic opportunities as cotton industry jobs were increasingly mechanized, and a region-wide poverty persisted in the Delta.

In 1970, the U.S. Census conducted a special survey of 14 rural counties in Delta Arkansas as part of a wider study of “low-income” counties in regions such as Appalachia or western American Indian Reservations. Collectively, these Arkansas counties exhibited just 18.3% of workers as "farm workers" of any kind (including farmers); a historic low. For the cotton Delta, the percentage of farm workers was roughly equal to the combined total of professional, technical, managerial and administrative jobs. By 1970, the white collar sector had more or less overtaken the farm.\(^{20}\) The survey revealed a divide, as the poorest in the region were very poor. Over two-thirds of residents had less than a high school diploma, a figure that was over 90% for black residents in the sample. Also in 1970, across the Mississippi River at the eastern edge of the Delta in Mississippi, Holmes County possessed a poverty rate of 62%, a rate so high that an official from the Mississippi Council on Human Relations said that families in the 1960s Delta could be “actually too poor to participate in a poverty program.”\(^{21}\) By 1970, Delta poverty continued to exist, even in a world shedding the chains of tenant farming and hand-picked cotton.

A reader might assume the transformations of the Delta cotton world during the mid-twentieth century were overwhelmingly beneficial for the region in terms of economic or human development indices: labor arrangements became freer, political participation by all races increased, voluntary migration of displaced farm workers erased the serf-like systems of debt peonage and tenant farming. In addition, the general urbanization and growth of Delta state cities (not Delta cotton core cities) during the twentieth century, among both metropolitan and micropolitan statistical areas, gave credence to the economic revitalization of the late twentieth-century “New South” era. While general economic development indicators of the Delta states rapidly increased with the gradual decline of the cotton landscape, the specific ex-plantation counties and towns in the historic Delta cotton belt experienced stark economic decline. The ex-plantation counties with the greatest cotton productivity in 1930 were, from 1970 onwards, some of the poorest, least employed, and least educated counties in America.\(^\text{22}\)

This poverty continues to the present, as seen by exceptionally negative statistics of development, income, and personal well-being: the Delta counties of Arkansas, Louisiana, Mississippi, and Tennessee comprised 17 of the 34 counties in the United States with the highest poverty level in 2008. That same year in Tunica County, Mississippi, the average male life expectancy of just 66 years was one of the lowest in the nation, comparable to the average life expectancy in Pakistan.\(^\text{23}\) In Mississippi County, Arkansas, by the late 1990s, over a third of children lived in poverty, and over 40% of

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\(^{22}\) Poverty rates in Delta counties were similar to high-poverty rate counties in the Appalachia region of eastern Kentucky, and the various American Indian Reservations (including Cheyenne River, Crow Creek, and Rosebud) in western South Dakota. U.S. Census Bureau (2008).

adults did not graduate from high school. Delta states are routinely named as the ‘worst’ in the United States under a variety of metrics. In 2010, Mississippi had the highest poverty rate, the highest infant mortality rate, and the lowest average income in the U.S.; stories of wage labor working on sprawling local catfish farms mention a weekly wage of just $165. Human development is limited by a lack of higher education: with sparse location of major research universities throughout the Delta, the region does not benefit from the associated positive economic feedback loops of college student presence, university-related spending, or the supply of local college graduates.

The end of mass-labor hand-picked cotton production created a tableau of too many small unsupportable Delta towns with no central economic function or base. In addition, population decline continued throughout the Delta past 1970. What little population growth that has occurred in the post-1970 Delta often exemplifies broader suburbanization patterns, such as the recent population growth in Olive Branch,

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24 By the late 1990s, 95% of county roads in Mississippi County were unpaved. See The Economist (1998) “From cotton to steel.” and “The Delta region: Is there a future, and can it work?”
25 Louisiana, Mississippi, and Arkansas were named the three “laziest” states, respectively, in a 2010 study by BusinessWeek.com using statistics from the Bureau of Labor Statistics. Peter Katzmarzyk, a health professional in Baton Rouge, noted that these states were victims of location: the Delta, Katzmarzyk noted, is “very poor, has poor medical service, and is hot, humid, and has few opportunities for physical activity.”
27 The Shanghai-based Institute of Higher Education conducted a ranking of the world’s top 500 universities in 2006. The four “Delta South” states contain 11 of the world’s top 500 universities, yet under the broadest in-state “Delta” definition, only three “Delta”-located institutions – the University of Memphis, the University of Tennessee Health Science Center (both in Memphis, Tennessee), and the University of Mississippi-Oxford – place on this list.
28 For example, Coy, Arkansas, a “near-death” cotton gin town, still exists as an incorporated place, but in twenty-first century Coy, just one agribusiness enterprise handles cotton bales that exist as “large, modular units” trucked out for further export. The town’s business district has fallen into a typical Delta state of disrepair as population declined after 1970. Walls, http://encyclopediaofarkansas.net/encyclopedia/entry-detail.aspx?search=1&entryID=2082
29 Old River Township is one of 20 townships in Jefferson County, Arkansas. Only three of the 20 townships in Jefferson County – a supposed Metropolitan Statistical Area – experienced population growth from the 2000 census to the 2010 census.
Mississippi, experiencing growth as a suburb of Memphis, Tennessee. (However, the converse of suburbanization is outmigration, and Memphis, as the largest Delta city, has experienced several waves of economic decline after 1970.)

Sustained economic development is difficult in the region, for a variety of historic and systemic factors related to cotton plantations and tenant farms, the low land ownership rates in a world of larger agribusiness farms, and entrenched financial disarray – Holmes county, Mississippi had a mortgage denial rate of 35% compared to the rest of rural (including non-Delta) Mississippi’s denial rate of 26%. Similar measures and trends appear for credit scores, home value, and unemployment. Small business loans are difficult to obtain, according to the Enterprise Development Corporation in Jackson, Mississippi. Local banks historically accepted land as collateral, but with increasingly larger farms held by a smaller group of farmers, attempts at business creation by non-landed Delta citizens have been stymied by a lack of collateralizable land.

And the pre-1970 past has economic legacies that extend to the present. The Economist notes that the Mississippi’s Enterprise Development Corporation described a regional economic study that “showed that the Delta was like a doughnut, with rich white farmers making up the outer ring and poor blacks making up the hole,” a reminder of the lasting preferential effects of segregation upon the landscape. Beyond small businesses, the processes of scaling up and merging occurring with land parcels and cotton farms is occurring in larger Delta businesses as well, resulting in a loss of local business (and therefore local retained earnings or reinvested capital in the area.)

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30 Lepeska (2010). The old cotton world of downtown Olive Branch is now a historic district called “Old Towne”, and the old, sprawling complex of the town’s former cotton gin (closed in 1974) was redeveloped.
This is not to suggest that developmental attempts were not made. Alston described the broader South in the twentieth-century succinctly: “whenever there was a choice between growth and welfare, the South opted for growth.” Yet these growth attempts in a post-1970 “declined Delta” world have faced challenges. As manufacturing jobs have left the unionized Rust Belt, relocating to the “right-to-work” states in the South, factories are far more common in the non-Delta states such as North Carolina or Georgia compared to Arkansas or Mississippi. Even while the Delta states have some advantages of geographic location due to proximity near the Mississippi River, often these spatial advantages go unused. Manufacturing in Delta states since 1970 are typically laden with locational caveats. Limited Delta industrialization occurred after 1970, including plants related to the steel industry in Northeast Arkansas during the 1980s and 1990s, yet successes are rare.

Amidst this poverty-stricken Delta world of 1970 and beyond, local policymakers, business leaders, and communities have routinely looked towards a particular program, industry, or policy as a “silver bullet” for regional economic growth. A variety of development schemes were anticipated as economic saviors. Nine casinos opened near Tunica, Mississippi, in the northwest corner of the state in 1992, but by century’s end, positive economic results had not been seen, as high unemployment, depopulation, and

34 This is particularly true of the wave of automobile factories drawn to low-tax Southern enterprise zones. For example, Memphis, Tennessee is near the “geographic center” of retail firms, according to mapping data by Larry Joseph. Bailey (2011) notes that the “spatial mean center” for U.S. retail is near Memphis. However, there are counterexamples, such as the location of the headquarters of FedEx in Memphis.
35 Toyota Motor Manufacturing Mississippi, constructed in 2010-2011 in Blue Springs, Mississippi is located outside of the Delta core, far beyond the Yazoo Delta. Blue Springs’ location along U.S. Highway 78 (Future Interstate 22), a divided highway that connects Memphis to Birmingham, is likely due more to the attraction of transportation access rather than due to an attractive Delta core business environment.
poverty rates plagued the casino counties.\textsuperscript{38} Infrastructure improvements, such as the current construction of Interstate 69, are similar attempts at attracting “development.”

Monies from the federal government and agencies such as the Delta Recovery Authority have been viewed as preconditions for economic boom, but have had little success, even as future state-supported programs are discussed.\textsuperscript{39} Prisons, such as the Mississippi State Penitentiary (Parchman Farm) has become a haven of employment for Delta residents, but correctional facilities have not provided long-term employment.\textsuperscript{40}

State intervention has yielded few long-term successes. In June 1998, The \textit{Economist} noted that Arkansas governor Mike Huckabee announced that “he was going to the Arkansas half of the Mississippi Delta, to sort out how to make the region grow. Later in the month, the trip was postponed without explanation. Mr. Huckabee is not the first politician to get cold feet about the Delta and, alas, he will not be the last.”\textsuperscript{41}

Arkansan Rex Nelson wrote about the economic and demographic losses within the modern Delta, arguing that “…our definition of economic development must change. The old strategy of obtaining government grants and using them to build industrial parks is no longer going to be sufficient.”\textsuperscript{42}

\begin{itemize}
\item[40] Oshinsky notes of these prison jobs that “an applicant must pass a written test and be a high school graduate... These are tough restrictions in the Delta, where the high school drop-out rate exceeds forty percent.” Oshinsky (1997), p. 253.
\end{itemize}
Recent Delta “development” has included tourism, as the plantation “big house” had fallen aside as an economic center of cotton production by 1970. Some plantations, such as Louisiana’s Frogmore Plantation, have been converted into successful tourist destinations, where guests pick cotton on-site.\textsuperscript{43} Redeveloped cotton gin complexes dot the tourist landscape of the Delta in Arkansas and Mississippi, and the Blues music genre has afforded attempts at remaking northwest Mississippi in particular. In the decades since 1970, Delta forces have attempted to navigate the changing meaning of a “plantation” landscape, including struggles over memory of a past cotton landscape.

One systematic remaking of Delta populations may result from increasing influxes of migrants, mostly from Mexico and the rest of Latin America, into small barren Delta towns. This influx is a recent phenomenon: the United States Census of Agriculture did not include farm-related demographic data for “Farm Operators of Spanish Origin” until 1978.\textsuperscript{44} While Hispanic immigrants do not comprise a majority of population in Delta towns, their increase and community presence may attract more permanent workers (and thus local spending) to the Delta.

\textsuperscript{43} The owners of Frogmore argue such touristic spaces are the culmination of “their desire to preserve history motivated them to save from destruction the antebellum buildings and gin on Frogmore.” Frogmore: About Us. http://www.frogmoreplantation.com/about.htm.
7.2 From Mule to Deere: A Rural-to-Rural Model of Economic Change

Webb, Mississippi’s John Deere dealer sits near “Gin Quarters Road”, a reminder of the past mule-driven, gin-town, hand-picked world of cotton agriculture that existed in the Mississippi Delta before 1930. This banal intersection of past and current modes of cotton production understates the sweeping changes undertaken in this landscape of rural cotton agriculture. By 1970, external sources of national and global cotton production and internal processes of mechanization, outmigration, land parcel accumulation, and social revolutions had moved the rural Delta beyond its traditional cotton-dependent past.

But, a major distinction must be made: after decades of governmental intervention in economic depression and war, of mechanization and its effects on labor intensiveness, of population transfers from region to region, the Mississippi Delta region in 1970 was still an overwhelmingly rural region. The starting point and ending point of four decades of sweeping economic changes was a “rural” landscape.

Because of this continued rural nature, many arguments of traditional economic change focus on positive change, or “development”. And such “development” would challenge this dissertation’s assertion of a rural-to-rural economic remaking: a “rural” landscape is typically viewed as an undesirable economic realm in need of (assumed) financially beneficial urbanization; an “urban” state is the aspiration for economic growth. Clark argued both the historical and present state of urban places around the world is associated with “interdependence” in relation to increasing capital accumulation.

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45 See Knox (2011), Hansen (2010) and Muller (2010) for traditional arguments of increased economic growth associated with urbanization within academic geography. For “structuralist” arguments of urbanization, particularly in rural developing areas, see Wallerstein (1979) and Taylor (1993).
and capital markets.\textsuperscript{46} Furthermore, “urban” states of development allow for elevated personal incomes, and cities are seen as increasing associated “human capital.”\textsuperscript{47}

And studies are not limited to U.S.- or Western-style urban models: global studies in urbanizing East Asia, for example, also link increased economic success to places with increased urbanization.\textsuperscript{48} Henderson takes a quantitative approach to argue that rural concentrations (located in regions that could potentially support more urban concentrations) suffer “economic losses”. Henderson identified “a best degree of urban concentration, in terms of maximizing productivity growth.”\textsuperscript{49} Existing scholarship of correlations (and argued causations) of urbanization and associated economic growth is numerous.

This research would suggest that economic change of a region is not reliant on economic “development”; rather, the vast changes occurring on the landscape of cotton agriculture in the twentieth century Delta were still economic restructurings, with strands of development, including mechanized equipment, the shedding of traditional labor systems, and so forth. Although the Delta after 1970 was a region of widespread poverty for former cotton workers, the region itself still possessed a degree of economic success. Delta cotton was financially profitable after 1970, but the direct economic gains were held by a small number of landowners and commercial farm owners.

This dissertation’s analysis of a “rural-to-rural” model differs significantly from other rural-to-rural economic changes. Barron identified the development of complex

\textsuperscript{46} Clark (1998), pp. 85-95.
\textsuperscript{47} Bertinelli and Zou (2008), who reported increased “human capital” associated with city development and urban economies. Also see Moretti (2004) and Ciccone and Peri (2006) for a relation to increased incomes.
\textsuperscript{48} See Tan and Ding (2008).
\textsuperscript{49} Henderson (2003), p. 47.
civic organizations and commercial market links.\textsuperscript{50} However, each of these benchmarks of change were movements toward a more developed urban hierarchy with greater potential and increased capacity for urban growth.\textsuperscript{51} Daniel and Hart both argue rural-to-rural economic change, but neither separates cotton agriculture as specifically exceptional with respect to economic changes (such as mechanization), instead treating many American crops (tobacco and rice for Daniel, beef and dairy for Hart) as similar landscapes.\textsuperscript{52}

This research argues a specific transition experienced by changes in cotton agriculture, as exemplified by changes in the mid-century cotton Delta (Figure 7.5). Changes in several aspects of economic arrangements occurred throughout the 1930 to 1970 period. Settlement patterns changed from a dispersed agrarian tenant farming system, to a cluster of fewer tenant farmers, to an emptied depeopled landscape. Cotton ginning functions moved from on-site in the plantation, to a cotton “gin town”, to commercial farms, where modular baling allowed for efficient transport to gin. Land parcelization changed from a dense tenant farming landscape (with few owners but many renters) to fragmented ownership and control (where landowners reasserted control of individual parcels of land, often evicting tenant farmers) to a landscape of large land parcels. Labor changes over this period were seen, as a landscape of dispersed tenant laborers gave way to a labor pool dominated by wage labor from nearby cities, until widespread mechanization led to fewer and fewer laborers required to harvest cotton on any given farm. A general model of economic change starts and ends with “rural” states.

\textsuperscript{50} Barron (1997).
\textsuperscript{51} Barron’s identification of increased circulation of the mail-order Sears and Roebuck catalog is one such example: circulation increased to semi-urban places; or, places with potential for additional urban growth.
\textsuperscript{52} See Daniel (1986) and Hart (2003) in detail.
Figure 7.5: A model of rural economic change in the cotton Delta.
Cotton was not gone from the Delta by 1970, nor had it disappeared by 2000. Cotton had merely ceased to be the central organizing factor of the spatial arrangement of Delta economy, settlement, and society. Cotton is gone from the day-to-day landscape of Delta residents, but the associated effects of changes in cotton production have brought about drastic region-wide transformations. When viewed on a long-term scale, rural cotton agriculture (and the rural lives involved in cotton agriculture) changed very little from 1865 to 1930, even as the world around the cotton farm absolutely changed. From 1930 to 1970, however, a series of repeated shock waves of economic change redrew the landscape. The changes that occurred in the Delta (as a result of external and internal factors) between 1930 and 1970 were too radical and too rapid to be reversed. After 1970, the forces simply continued the already-in-process decline of small Delta towns and Delta economic opportunities. Whether a post-1970 Delta study is bounded at 1990, or 2000, or 2010 (or 2020) is of little consequence, as these dates merely represent additional degrees of processes already and irreversibly underway in 1970.

Another view of the rural-to-rural regional transformations of the Delta from 1930 to 1970 would be that these transformations represented the final death of the antebellum South in the Delta, via the end of mass-labor hand-picked agriculture. Neither the Civil War nor Reconstruction nor the Gilded Age nor World War I ever changed the basic spatio-economic arrangement of rural agriculture in the Delta (and in the South at large). But with the financial shock of the Great Depression, federal intervention during Depression and World War II, technological change including adoption of the mechanical cotton picker, migratory forces, and pressures from cotton hearths around the country and globe, an array of crisis points served to reorder the Delta’s regional economic patterns.
7.3 Future Research and Implications

Future research efforts related to this multi-decade shift will focus on refining the spatial dimensions of individual lives, farms, and firms, building upon the increased availability of personal records, as seen in recent releases of the 1940 manuscript census. Better population samples and IPUMS census migration data, combined with an increasingly reliable set of historic boundary files and feature datasets within GIS will assist a closer examination of the contours of demographic shifts at a variety of scales. These migratory studies will be further enhanced with the release of the 1950 census in 2022.

Obvious comparative studies of “other” cotton regions, both westward in the United States, as well as global cotton cores from Egypt to India to China, are possible for deeper individual case studies of the wider world of cotton production. Such micro-level analyses could aid the detailing of comparative advantages and disadvantages of these global cotton hearths.

Deeper case studies of land-parcel accumulation are possible. A closer tracking of agribusiness land-parcel acquisition through additional county courthouse records within a larger sample of counties, tied to broader regional and national fluctuations in interest rates and tax policies, might similarly reframe the spatio-temporal moments of landscape change among both larger and smaller farms. Additional uses of historical GIS related to a variety of land parcel data metrics, including area, spread, contiguous nature, perimeter measures, and acquisition growth can illuminate the difficulties (or ease) faced by farms with dispersed land plots in eras of hand-picked (or mechanized) agriculture.
More in-depth examination of historical financial and land records also allow for exploration into a possible recapitalization of the Delta land market: did the financial shocks of the Great Depression, leading to widespread foreclosures, have eventual positive local financial effects? If financial institutions were able to resell foreclosed farms, these banks would gain additional capital reserves for increased lending, and more individuals and farms would own larger parcels of land.

The morphologies of cotton gin towns are further developed from larger samples of historical business records and study of wider patterns of twentieth-century retail and manufacturing. Social evidence from oral histories in the region allow for qualitative data points to describe power relationships, political economies, and labor systems in a region whose history has long been absent of these voices.

Additional future lines of research can be discovered from qualitative studies of oral histories. Several deep oral histories from the mid-century study period, including personal memoirs of former residents of Hopson Plantation, are available to be better contextualized within geographic bounds rather than historical ones. Mapping of oral histories allow for an understanding where individuals worked, traveled, and lived on a daily basis while associated with plantation agriculture.

The post-1970 phase of this research has included a variety of shifts, with still-uncertain consequences, including: the cultivation of rice, soybean, corn, and aquaculture; an increasing segment of largely Hispanic labor; and a decline in the market power of Delta cotton domestically as production has shifted across the southwest to Arizona and California. Future analyses include discussions on the collapse of cotton farming in the region and increases in crop diversification; the continued state of
increasing poverty within this former cotton region; the meeting of the Delta’s past and present; and potential developmental “solutions” for regional economic growth (including possible transferability to other ex-plantation regions of traditional agriculture.)

The spatial geographies of rural landscapes of cotton agriculture have been remade through time. The antebellum world consisted of large plantations with a “big house” as both planter home and office, a gin house, expansive fields, and a dense cluster of slave quarters. The post-emancipation tenant farming world continued the centrality of the plantation home, but with a scattered and separated pattern of tenant farmer homes, each working nearby fields ultimately owned by the planter. In the early twentieth century’s tenant farming period, cotton ginning functions migrated from the plantation to nearby cotton gin towns.

This research examines a new phase, or a change of phases, away from the tenant farming model towards a mechanized cotton agriculture requiring less labor and resulting in larger farms. This newest phase of a cotton agriculture landscape saw labor shifts from tenant contracts to day labor, transportation shifts from mule-driven cotton wagons to trucks, and financial shifts from plantation-minted wages to mature credit systems. Each of these shifts had downstream effects on rural geographies: day labor necessitated importation of temporary workers in lieu of long-term land contracts. Trucks and tractors replacing mules and hand-picked cotton meant the decline of local stables, blacksmiths, or veterinarians in favor of garages, mechanics, and fuel stations. Changing financial markets resulted in the failure of an oversaturated layer of small banks and the decline of
furnish merchants, replaced by retailers with an increasingly state- or national-level presence.

These changes were not necessarily internal in origin; the changes experienced by the Delta region were the result of changes in other cotton regions. Greater efficiencies in California cotton led to a deemphasizing of more labor-expensive Mississippi cotton production. Lower total production costs in China, the former Soviet Union, and India marginalized Delta cotton even further. Former characteristics of cotton production that had served the Delta as comparative advantages in 1930 existed as comparative disadvantages by 1970.

The economic shocks of the Great Depression, state intervention during the Great Depression and World War II, and technological advances such as mechanization were external forces that acted upon individual Delta farmers and farm workers. Cotton laborers did not personally or collectively decide to change their region’s economic geography; the economic geography of Delta cotton was changed as a result of these external forces. Ultimately, the revolutionary changes experienced in the Mississippi Delta from 1930 to 1970 represent a new phase of the landscape of cotton agriculture, and this research offers new perspectives of rural-based economic development.
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