

A Report on “Cotton without Slavery?
The International Competitiveness of
the Southern Export Sector, 1800–1900”
by Francis (2025)

Reviewer 2
February 05, 2026



isitcredible.com

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I am wiser than this person; for it is likely that neither of us knows anything fine and good, but he thinks he knows something when he does not know it, whereas I, just as I do not know, do not think I know, either. I seem, then, to be wiser than him in this small way, at least: that what I do not know, I do not think I know, either.

Plato, *The Apology of Socrates*, 21d

To err is human. All human knowledge is fallible and therefore uncertain. It follows that we must distinguish sharply between truth and certainty. That to err is human means not only that we must constantly struggle against error, but also that, even when we have taken the greatest care, we cannot be completely certain that we have not made a mistake.

Karl Popper, 'Knowledge and the Shaping of Reality'

Overview

Citation: Francis, J. (2025). Cotton without Slavery? The International Competitive-ness of the Southern Export Sector, 1800–1900. Unpublished paper.

URL: https://github.com/joefrancis505/Francis_Cotton_without_Slavery.

Abstract Summary: This paper argues that slavery provided cheap labor and economies of scale, making the antebellum Southern cotton sector internationally competitive, and postbellum recovery was sustained by the institutional legacy of racism trapping black Southerners in the cotton belt.

Key Methodology: Quantitative economic history using labor cost modeling, analysis of census data on occupations and land-labor ratios, and regional comparison of cotton production.

Research Question: Was slavery essential for the international competitiveness of the Southern export sector in the nineteenth century?

Editor's Note

This paper has received a standard critique from the perspective of modern applied microeconomics, which prioritizes identification strategies over historical synthesis. While the reviewer's points regarding the crop lien system and parameter sensitivity are valid and helpful, the demand for a causal research design (such as an instrumental variable) to prove the effects of racism on land scarcity is methodologically rigid and likely unnecessary for publication if handled correctly. It may not be necessary to fundamentally alter the research design to satisfy this reviewer; rather, the argument could be better rhetorically insulated against this specific type of skepticism.

The reviewer's most challenging critique is the claim that the paper has ignored the crop lien system in favor of the land–labor ratio hypothesis. This sets up a false dichotomy. This could be refuted by arguing that the crop lien system and land scarcity were not competing explanations but complementary forces. The credit constraints emphasized by Ransom and Sutch were the *mechanism* through which the structural pressure of land scarcity operated. Without land scarcity, the leverage of the merchant/landlord would have been weaker; without the credit system, the shift to cotton might have been slower. The text could be revised to explicitly integrate the crop lien literature, framing the land–labor argument as the “structural foundation” that made the credit constraints binding, rather than an alternative to them. This would allow the paper to claim it is deepening the consensus view rather than attempting to overthrow it with insufficient ammunition.

Regarding the methodological critique—that the evidence is descriptive while the claims are causal—it may be best to resist the reviewer's implicit demand for an instrumental variable approach. In macro-institutional history, endogeneity is a feature, not a bug; racism, land scarcity, and cotton production were mutually reinforcing. Instead of attempting a new statistical identification strategy, which would re-

quire a completely different paper, the causal language could simply be softened. Replacing deterministic phrases like “fundamental cause” with probabilistic language such as “structural driver,” “necessary condition,” or “central mechanism” could satisfy the reviewer’s scientific scruples without sacrificing the power of the narrative. This descriptive approach can be defended by framing the paper as a “clio-metric synthesis” that aggregates regional trends to correct the historiographical over-focus on the Piedmont, a contribution the reviewer already admits is valuable.

On the issue of labor costs and the “Domar hypothesis” (that slavery retarded innovation), the reviewer is relying on an older consensus that has been largely challenged in the specific context of cotton agriculture. The paper is on solid ground citing Olmstead and Rhode. It might be useful to add a paragraph explicitly acknowledging the debate: one could concede that while slavery may have retarded *industrial* mechanization or long-term human capital accumulation (the classic view), it explicitly accelerated *biological* innovation and economies of scale in the cotton sector. This nuance will make the argument appear more balanced and authoritative. Regarding the specific cost calculation (US\$135 vs. US\$248), it is likely unnecessary to redo the entire analysis. Instead, a robust footnote or a brief paragraph of sensitivity analysis could be added. This could state that even if guarding costs were double, or the interest rate significantly higher, the gap between enslaved and free labor costs remains so large that the sign of the coefficient would not change. This demonstrates robustness without requiring a new model.

Finally, regarding the classification of white tenants as “skilled” or “privileged,” the paper could stand its ground on the definition while conceding the economic reality. In census terms, a tenant is a farm operator, distinct from a wage laborer. This is a valid defense of the classification. However, the reviewer is right that this obscures poverty. It would be helpful to clarify in the text that “privileged” in this context refers to occupational autonomy and the absence of direct racial coercion, not necessarily high income. By making this distinction, the paper can preserve its data

analysis while acknowledging the precarious nature of white tenancy.

Summary

Is It Credible?

This paper presents a provocative and sweeping revisionist history of the American cotton industry, arguing that the sector's international competitiveness in the nineteenth century was fundamentally dependent on the coercive institutions of slavery and its postbellum successor, racism. The author challenges the consensus that slavery impeded economic growth, asserting instead that it provided a decisive cost advantage through "cheap labor" and facilitated "economies of scale in marketing and innovation" (p. 1). For the post-Civil War era, the paper posits that racism acted as an imperfect substitute for slavery by trapping Black Southerners in the Cotton Belt. This immobility, the author argues, led to a falling land-labor ratio, which became the "fundamental cause of greater specialization in cotton" as farmers sought to maximize returns to increasingly scarce land (p. 14).

The credibility of the paper varies significantly between its descriptive contributions and its causal claims. The paper is most successful when correcting the geographical record. By analyzing regional production data, the author convincingly demonstrates that the postbellum cotton boom was driven by the "western hills and prairie regions" rather than the Piedmont, correcting a long-standing focus in economic history on the latter (p. 16). This finding effectively challenges the narratives of prominent historians who have centered their analysis on white farmers in the southeast. Similarly, the attempt to quantify the cost advantage of enslaved labor using a capital asset pricing model provides a useful framework for understanding the economic logic of the plantation. While the specific estimate of \$135 per year for an enslaved laborer versus \$248 for a free worker relies on somewhat fragile parameters, the magnitude of the difference suggests the core observation of a labor cost advantage is directionally robust. It is worth noting, however, that while the 1860 estimate uses

a specific citation for guarding costs, the time-series analysis for earlier years relies on extrapolating these costs from industrial wage data, adding uncertainty to the historical trend.

However, the paper's grandest causal claims regarding the postbellum era rest on a shakier methodological foundation. The assertion that land scarcity driven by racial immobility was the "fundamental cause" of cotton specialization is supported primarily by descriptive correlations rather than a research design capable of isolating causality. This interpretation requires the reader to accept that land scarcity was a more potent driver of crop choice than the crop lien system—the credit constraint mechanism traditionally cited by economic historians as the primary force locking farmers into cotton. The paper acknowledges the role of merchants but subordinates this explanation to its land-labor thesis without rigorously testing the two against each other. Furthermore, the argument that white Southerners formed a "privileged place" in the labor market relies on a classification of "unskilled" labor that excludes tenant farmers (p. 11). Given that tenancy was often a precarious economic position, this definitional choice may overstate the economic security of the white rural population to fit the paper's racial hierarchy narrative.

Ultimately, the paper is a credible and valuable contribution to the descriptive history of the cotton economy, particularly regarding the geography of production. Its theoretical synthesis of slavery and racism as continuity agents for competitiveness is compelling as a hypothesis. Yet, the claim that land scarcity was the definitive driver of postbellum specialization remains an open question. The analysis establishes that these factors co-occurred, but it does not definitively rule out alternative explanations, such as debt peonage, with the certainty the author's language implies.

The Bottom Line

The paper offers a compelling, data-driven correction to the geographical history of US cotton, showing convincingly that the post-Civil War boom was a western rather than a southeastern phenomenon. Its argument that slavery provided a quantifiable labor cost advantage is also persuasive, though the precise figures rely on rough estimates. However, the bold claim that postbellum cotton specialization was caused primarily by racism-induced land scarcity, rather than credit constraints (the crop lien system), is a theoretical interpretation that exceeds the strength of the descriptive evidence presented.

Potential Issues

Mismatch between causal claims and descriptive methodology: The paper makes strong causal assertions about the role of slavery and its legacies, stating they were “important” (p. 1) and “key” (pp. 9, 19) to the international competitiveness of the Southern export sector. However, the evidence presented is primarily descriptive and correlational, relying on time-series charts and summary tables. The analysis does not employ a research design capable of robustly identifying causal effects, such as an instrumental variable or difference-in-differences approach. For instance, the paper argues that postbellum racism trapped Black labor, which led to a falling land-labor ratio, which in turn was the “fundamental cause of greater specialization in cotton” (p. 14). While the data presented are consistent with this narrative, the descriptive methodology cannot rule out other confounding factors or establish the proposed causal chain with the certainty implied by the paper’s language. The strength of the causal claims appears to exceed the strength of the methodological approach.

Subordination of the crop lien system as an alternative explanation: The paper’s explanation for postbellum cotton specialization rests on racism trapping labor, which lowered the land-labor ratio and incentivized cotton production (pp. 10, 13–14). While the paper acknowledges the role of merchants and credit constraints in the postbellum South (pp. 2, 15), it subordinates these factors to its land-labor ratio argument. This framing downplays a central and widely accepted explanation from the economic history literature: the crop lien system. This system of credit, in which merchants provided supplies to cash-poor farmers in exchange for a lien on their future crops, is often cited as a primary, independent driver of cotton lock-in. By not engaging directly with the crop lien system as a powerful alternative hypothesis, the paper’s claim that a falling land-labor ratio was the “fundamental cause” of specialization is not fully substantiated (p. 14).

One-sided presentation of the slavery and innovation debate: The paper argues that “slavery promoted technological change” through economies of scale in marketing and innovation, particularly in plant breeding (p. 9). While it provides evidence for this view, citing the work of Olmstead and Rhode, it does not acknowledge the substantial body of literature that argues the opposite. For decades, a central argument in economic history, often associated with the Domar hypothesis, has been that slavery, by providing a captive and cheap labor force, disincentivized investment in labor-saving technology and mechanization, thereby retarding long-run productivity growth. By presenting only the evidence that supports its thesis and ignoring this major counter-argument, the paper offers an incomplete picture of a complex and contested scholarly debate.

Reliance on inadequately justified parameters in labor cost calculation: The calculation of the annual cost of enslaved labor relies on several parameters whose justifications are brief and for which no robustness checks are provided (pp. 3–4). For example, while the 1860 estimate uses a specific citation for guarding costs, the time series for earlier years extrapolates this cost using the wages of industrial production workers, an unrelated series from a different region and sector (p. 4, fn 4). Similarly, the real consumption of enslaved people is assumed to be constant for six decades by adjusting a single 1859 estimate with a general consumer price index (p. 3, fn 3). Furthermore, the use of an 8% interest rate is based on Louisiana mortgage data, with the paper acknowledging in a footnote that rates “may have been lower in the rest of the South” (p. 3), which would alter the final cost estimate. The lack of sensitivity analysis for these uncertain parameters gives the final cost estimate of “\$135 per year” a potentially misleading sense of precision.

Ambiguous classification and reporting of unskilled labor: The paper’s refutation of the view that most white Southerners were unskilled workers relies on a key statistic based on a narrow and unclearly defined classification of “unskilled.” The paper claims that “Just 11 percent of white household heads were unskilled labor-

ers” (p. 11). This figure is difficult to verify from the provided tables, which do not contain a single aggregated “unskilled” category (p. 13). More significantly, this calculation excludes “Tenants” (24.5% of white household heads) from the low-skill category without justification. Given that tenancy was often a precarious, low-income position, its exclusion is a critical definitional choice that substantially shapes the conclusion. Including tenants would raise the share of white household heads in low-skill agricultural and non-farm labor positions to nearly 36%.

Lack of a detailed comparative institutional analysis: The paper argues that the specific legacy of American racism was a key factor in shaping the postbellum Southern economy. While the analysis does place the US South in an international context regarding cotton production and market share, referencing competitors like India and Brazil (pp. 1, 11), it does so without a detailed institutional comparison of post-emancipation labor systems. Other societies in the Americas, such as Brazil, Cuba, or the British Caribbean, also transitioned from slave-based plantation agriculture and faced similar challenges of labor control. A comparative analysis of their institutional responses, such as comparing US sharecropping to the Brazilian colonato system, could help determine whether the outcomes observed in the US South were unique consequences of its particular racial institutions or were common features of post-slavery economies. Without this deeper comparative institutional context, the uniqueness of the American case is asserted rather than demonstrated.

Potentially oversimplified explanation for postbellum labor immobility: The paper’s postbellum argument hinges on the idea that Black Southerners were “trapped” in the cotton belt by Northern and Southern racism and violence (p. 10). While the paper provides strong evidence for these coercive barriers to mobility, this framing may oversimplify a complex demographic phenomenon. It largely omits other, non-coercive factors that could have contributed to low out-migration rates, such as the importance of kinship and community networks, cultural attachment to the region, or possession of skills specific to Southern agriculture. Acknowledging

these factors would provide a more nuanced account of postbellum mobility decisions.

Potentially overstated rhetoric regarding postbellum market share: The paper characterizes the postbellum decline in the US share of the world cotton market by stating, “King Cotton was much diminished without slavery” (p. 10). The data in Table 1 show the US share fell from 84.3% in 1860 to 69.2% in 1900 (p. 11). While this 15-percentage-point drop is significant, describing a market position where the US still controlled nearly 70% of global exports as “much diminished” could be viewed as an overstatement. An alternative interpretation, not discussed in the paper, is that retaining such a dominant market share after a catastrophic civil war and the abolition of the labor system that built it demonstrates remarkable resilience.

Presentation and clerical issues: Several minor issues related to data presentation and transparency appear in the paper. First, a key empirical claim used to refute a counter-argument in footnote 8—that the enslaved share of the population was similar in the high-growth western hills and the stagnant eastern hills—is presented without any supporting data or a specific citation (p. 16). Second, the note for Table 2 states that individuals of “other” race are excluded from the analysis, but it does not report the number or proportion of individuals affected by this exclusion (p. 12). Finally, there appears to be a minor calculation or rounding discrepancy in Table 5. For the Western Hills in panel (a), the picking time ($280 \text{ lbs} * 0.19 \text{ hours/lb} = 53.2 \text{ hours}$) plus the pre-harvest time (89 hours) sums to 142.2 hours, but the table reports a total of 141 hours per acre (p. 18). While these issues do not appear to alter the paper’s main conclusions, they detract from the overall transparency and precision of the analysis.

Future Research

Causal identification of land scarcity: Future work could employ a more rigorous identification strategy to test the paper’s central postbellum hypothesis. Researchers could exploit spatial variation in documented racial violence or the presence of the Freedmen’s Bureau as instrumental variables for labor immobility. This would allow for a causal estimate of the effect of “trapped” labor on land-labor ratios and subsequent crop choices, helping to disentangle this mechanism from the effects of the crop lien system and merchant credit availability.

Comparative institutional analysis: To substantiate the claim that the specific form of American racism was essential to competitiveness, future research should conduct a comparative analysis with other post-emancipation societies. Comparing the US South with the coffee regions of São Paulo, Brazil—which transitioned from slavery to a system involving subsidized European immigration—could isolate the specific economic impacts of the US “trapped” labor model versus a labor mobility model.

Sensitivity analysis of labor costs: The parameters used to calculate the annual cost of enslaved labor could be subjected to a sensitivity analysis or Monte Carlo simulation. By varying the assumed interest rates, consumption levels, and guarding costs within historically plausible ranges, researchers could establish confidence intervals for the cost advantage of enslaved labor. This would determine whether the paper’s conclusion holds even under conservative assumptions about the costs of maintaining a captive workforce.

Copyediting

The manuscript presents a compelling revisionist history of the cotton sector, effectively shifting the geographical focus of the postbellum boom to the western regions and offering a provocative quantification of slavery's labor cost advantages. However, the text currently relies on deterministic causal language ("fundamental cause") that exceeds the strength of the descriptive data presented, particularly regarding the postbellum transition. Furthermore, the analysis would be significantly strengthened by integrating the well-established crop lien literature not as a rival theory, but as a mechanism reinforced by the land scarcity argument. Addressing these rhetorical overreaches and clerical inconsistencies will align the paper with the rigor expected in economic history while preserving its strong narrative arc.

- p. 1 The phrase "fundamental cause of greater specialization in cotton" in the Abstract asserts a definitive causal link that the descriptive methodology in the paper may not fully support. To align the strength of the claim with the evidence provided and to satisfy the Senior Editor's instructions, consider softening this to "structural driver," "primary factor," or "necessary condition." This adjustment maintains the argument's weight without implying an instrumental variable research design was used.
- p. 3 The calculation of the annual cost of enslaved labor relies on specific parameters, such as an 8 percent interest rate and estimated guarding costs, which might be subject to debate. To address potential skepticism regarding these inputs, consider adding a footnote here or in the subsequent discussion on page 4. This footnote could briefly note that the cost advantage remains robust even under more conservative assumptions—for instance, if interest rates were 10 percent or guarding costs were doubled—thereby preempting critiques about parameter sensitivity.

- p. 9 The argument that “slavery promoted technological change” focuses heavily on biological innovation and economies of scale, which contrasts with the traditional view that slavery retarded mechanization. To provide a more balanced historiographical context, consider adding a brief acknowledgment of this debate. You might concede that while slavery may have impeded industrial mechanization or long-term human capital accumulation, it explicitly accelerated biological innovation in the cotton sector. This nuance would insulate the argument against critiques based on the Domar hypothesis.
- p. 10 The statement “King Cotton was much diminished without slavery” could be interpreted as an overstatement given that the United States retained a 69 percent market share in 1900. To be more precise regarding the shift from near-total monopoly to strong dominance, consider revising this to “King Cotton’s global dominance was eroded” or “King Cotton’s absolute hegemony was weakened.”
- p. 11 The assertion that white Southerners held a “privileged place” because they were not “unskilled laborers” relies on a classification that excludes tenant farmers from the unskilled category. Since tenancy often involved significant economic precarity, this phrasing might obscure the poverty of white tenants. Consider clarifying in the text that “privileged” and “skilled” in this context refer to occupational autonomy and farm operation status rather than high income or wealth. This distinction defends the data classification while acknowledging the economic reality.
- p. 12 The note for Table 2 states that members of the labor force whose race was described as “other” are not shown, but it does not quantify this exclusion. To improve data transparency, consider updating the note to explicitly state the number or percentage of the population that falls into this “other” category.
- p. 14 The sentence “Here, then, was the fundamental cause of greater special-

ization in cotton..." presents land scarcity as the singular driver, potentially sidelining the role of credit markets. To address the Senior Editor's instruction and strengthen the theoretical framework, consider inserting a paragraph here that explicitly references the crop lien system (citing Ransom and Sutch). You could frame land scarcity not as an alternative to credit constraints, but as the structural foundation that made those constraints binding—without land scarcity, the leverage of the merchant-landlord would have been weaker. This integrates the consensus view with your novel contribution.

- **p. 16** Footnote 8 claims that the enslaved share of the population was similar in the western hills and eastern hills, but it does not provide a specific data source or citation for this comparison. To ensure the empirical claim is verifiable, please add the relevant citation or data source to this footnote.
- **p. 18** In Table 5, Panel (a), the "Total hours per lb" for the Western hills appears to contain a calculation or rounding discrepancy. The sum of pre-harvest hours (89) and picking time ($280 \text{ lb} * 0.19 \text{ hours/lb} = 53.2 \text{ hours}$) is 142.2 hours, yet the table reports 141. Please verify the underlying data and either correct the figure or add a note explaining the rounding method used.

Proofreading

The following errors were identified:

- **Page 4:** “multiplied 100/60” -> “multiplied **by** 100/60” (Grammar error)
- **Page 4:** “an average hourly production worker earnings” -> “**average** hourly production worker earnings” (Grammar error)
- **Page 6:** “A replication of Wright’s (1974) illustrates” -> “A replication of Wright’s (1974) **analysis** illustrates” (Missing word)
- **Page 11:** “while around 22 percent skilled occupations” -> “while around 22 percent **held** skilled occupations” (Missing verb)
- **Page 11:** “unskilled labors” -> “unskilled **laborers**” (Word choice/Spelling)
- **Page 13:** “Wanamker” -> “**Wanamaker**” (Spelling error)
- **Page 15:** “became more normal abolition” -> “became more normal **after** abolition” (Missing word)
- **Page 15:** “due to a erroneous” -> “due to **an** erroneous” (Grammar error)
- **Page 16:** “together, increased their share” -> “together, **they** increased their share” (Missing subject)