



# THE COTTON BOOM, SLAVERY, AND LAND INEQUALITY IN NINETEENTH-CENTURY RURAL EGYPT

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# Outline

- I. Motivation and Research Questions
- II. Context: Cotton Boom and Slavery
- III. Links to the Literature
- IV. Background: Rural Egypt's Output, Labor, and Land Markets
- V. Data and Empirical Strategy
- VI. Findings
- VII. Next Steps

# I. Motivation and Research Questions

- Institutions that define property rights on labor (e.g. slavery, serfdom, free labor) and land (e.g. state property, collective property, private property) were perhaps the major determinants of the distribution of wealth (and income) in pre-industrial populations.
  - Slavery, or more generally, the coercion of labor, was the dominant form of labor organization throughout most of human history since the Neolithic Revolution.
- Institutions may have persistent long-term effects on current economic and political development (La Porta et al., 1997, 1998, 2008; Acemoglu et al., 2001, 2002, 2012; Banerjee and Iyer, 2005; Nunn, 2008, 2009; Dell, 2010; Nunn and Wantchekon 2011).

# I. Motivation and Research Questions

- This paper attempts to tackle the following research questions:
  1. Why does slavery, or the coercion of labor, emerge?
  2. Is slavery, with its hierarchical organization of labor, correlated with greater land inequality?
  3. Does land inequality persist over time? (No results yet)

# I. Motivation and Research Questions

- This paper provides novel econometric evidence on these questions using a unique natural experiment from nineteenth-century rural Egypt; the boom in cotton prices that occurred because of the American Civil War in 1861-1865, known as the “Lancashire Cotton Famine.”
- Egypt and India, two major producers of cotton prior to the boom, benefited as the U.S. South exited the market, expanding on their cotton plantations.
- Using the newly digitized Egyptian individual-level population census samples from 1848 and 1868, I find that the cotton boom led to the emergence of agricultural slavery and increased land inequality in cotton-favorable districts in rural Egypt.

## II. Context: Cotton Boom and Slavery

- Prior to the cotton boom, slavery in Egypt (an autonomous Ottoman province at the time), and in the Ottoman Empire at large, was mostly confined to domestic and/or sexual services, with the majority of slaves, mostly females, residing in cities.
  - Agricultural slavery, which was, as Cuno (2009) describes, “a rarity in Islamic history,” was very limited prior to the boom, and only existed in sugarcane plantations and certain public works in the Nile Valley (Helal, 1999).
- Muhammad Ali Pasha (autonomous Ottoman viceroy of Egypt in 1805-1848) monopolized trade of all major cash crops (cotton, wheat, rice, and sugarcane) in 1808-1842. After 1842, farmers became connected to the world markets.

## II. Context: Cotton Boom and Slavery

- An intriguing phenomenon that was long documented by historians (Earle, 1926; Baer, 1967; Helal, 1999; Cuno, 2009; Walz and Cuno, 2010) is that after the boom farmers imported slaves in large numbers from East Africa perhaps to work on their cotton plantations, leading to the emergence of large-scale agricultural slavery in the Egyptian countryside for the first time in its history.
- According to Owen (2002, p. 146-48), the growth of hamlets, one type of large agricultural estates, was largely attributable to the cotton boom and marked the rise of “agricultural capitalism” in the Egyptian countryside.
- Perhaps ironically, slavery was soon abolished in Egypt in 1877, meaning that large-scale agricultural slavery was in fact a very short-lived institution.

## III. Links to the Literature:

### *A. Historical Literature*

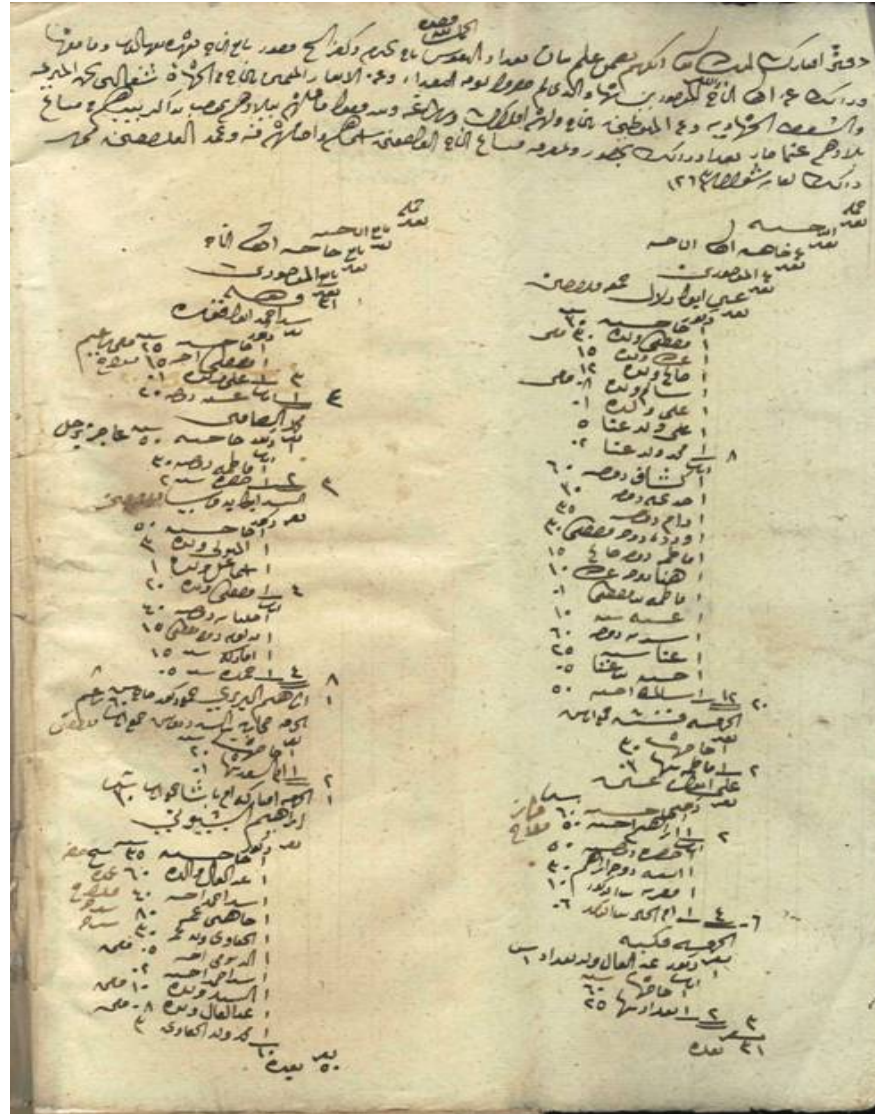
- “*The barbarism of the [U.S.] South, while destroying itself, [appeared] in the providence of God to be working out the regeneration of Egypt,*” (*North American Review* 98, no. 203 (1864), p. 483 (Cited in Earle, 1926)).
- Historical literature on the phenomenon is so far qualitative relying on contemporary sources and/or comparing the incidence of slavery before and after the boom in “non-random” villages (Helal, 1999; Cuno, 2009).
- The paper provides the first econometric evidence on the phenomenon using a new data source; the 1848 and 1868 census samples.



# New Data Source

- I digitized two nationally-representative samples from Egypt's individual-level population censuses of 1848 and 1868 from the original manuscripts at the National Archives of Egypt (Saleh 2013).
- These are two of the earliest individual-level data sources from the Middle East that include information on every household member, including females, children, and slaves.
- They are the only individual-level data source on slavery in Egypt before its abolition in 1877.

**FIGURE: A Scanned Page from the Census Register of a Village in the Nile Delta in 1848**



Page 1 of Register of the Village of “Bigirim wa Kafr al-Sheikh Mansour,” Al-Gharbiya Province, 1847

## Example from the Digitized Samples

- Farag Al-'Abd: Male, Slave, Able-bodied, 25 years, Inside the government's control, Brown color (Abyssinian?), Medium-height, With non-connected eyebrows and no facial scars.
- *Address:* (Village of) Awlad Moussa, (District of) Al-'Areen, (Province of) Al-Sharqiya, 1868.
- *Dwelling Information:* House of Ibrahim Selim, Tribe of Selim Selim (Sub-tribe from Awlad Moussa).

## III. Links to the Literature:

### *B. Origins of Slavery*

- The so-called “staples theory” in economic history holds that institutions that govern the organization of labor and land in an (rural) environment could be explained by the technology of production of its prevailing crops (Fenoaltea 1984; Goldin and Sokoloff 1984; Fogel 1989; Hanes 1996).
  - In particular, differences between “effort-intensive” crops (such as cotton, sugar, and tobacco), where pain incentives are efficient, versus “care-intensive” crops (such as olive oil, wine, and animal husbandry), where reward incentives are perhaps more efficient, may lead to different labor contracts, with the former requiring the coercion of labor while the latter leading to free labor contracts.

# III. Links to the Literature:

## *B. Origins of Slavery*

- Perhaps relatedly, in a series of seminal papers, Engerman and Sokoloff (1997, 2000, 2002) argued that the divergence in institutions and economic development between North and Latin America could be attributed to differences in their initial factor endowments.
  - Latin America was more favorable to the plantation of certain crops, such as sugar, cotton, and tobacco, which led to the emergence of slavery, high inequality, and less-inclusive political institutions.

## III. Links to the Literature:

### *B. Origins of Slavery*

- Domar (1970), following Neiboer (2011 [1900]), traced the emergence of slavery to factor endowments, in particular, the land-to-labor ratio.
  - In an economy where land is abundant relative to labor, with a non-working class of landowners, competition between landowners over scarce labor will drive wages up to the level of marginal productivity making landowners lose all their rents or surplus from land.
  - In this environment the three elements (free land, free labor, and non-working landowning class) cannot co-exist. The only way for landowners to enjoy a positive surplus from land is the coercion of labor via serfdom or slavery.

# III. Links to the Literature:

## *B. Origins of Slavery*

- There is relatively little econometric evidence on the causal factors behind the emergence of slavery in slave-importing populations, presumably because of the rarity of “natural experiments” in which slavery is the outcome variable.
  - Nilsson (1994) provides econometric evidence on the impact of the abolition of slavery on the pattern of production in the post-bellum U.S. South. He finds that the U.S. South switched away from cotton after slavery was abolished, hence suggesting that slavery was perhaps indispensable for cotton cultivation.
  - Nunn and Puga (2012) argue that ruggedness may explain the extent of slave *exports* from Africa.
  - As far as I know, this paper provides the first direct econometric evidence on the “staples theory” of the emergence of slavery.

## IV. Background: Rural Egypt's Output, Labor, and Land Markets

- Up to 1800, Egypt's agriculture was mostly confined to winter crops (wheat, barley, beans) due to its reliance on the Nile inundation in August. Summer crops (cotton, sugarcane, rice) were limited to farms close to the Nile.
- M. Ali (1805-1848) expanded on perennial irrigation in the Nile Delta, and less so in the Nile Valley in order to expand on summer "cash" crops.
- Long-staple cotton was discovered by a French industrialist named Louis Alexis Jumel in 1821. Since then, M. Ali expanded its agriculture largely in the Nile Delta (mild temperature).
- Sugarcane plantation increased in the Middle and Southern Nile Valley (high temperature). Rice increased in the Northern Delta (soil). Wheat was favorable in *all* Egypt.

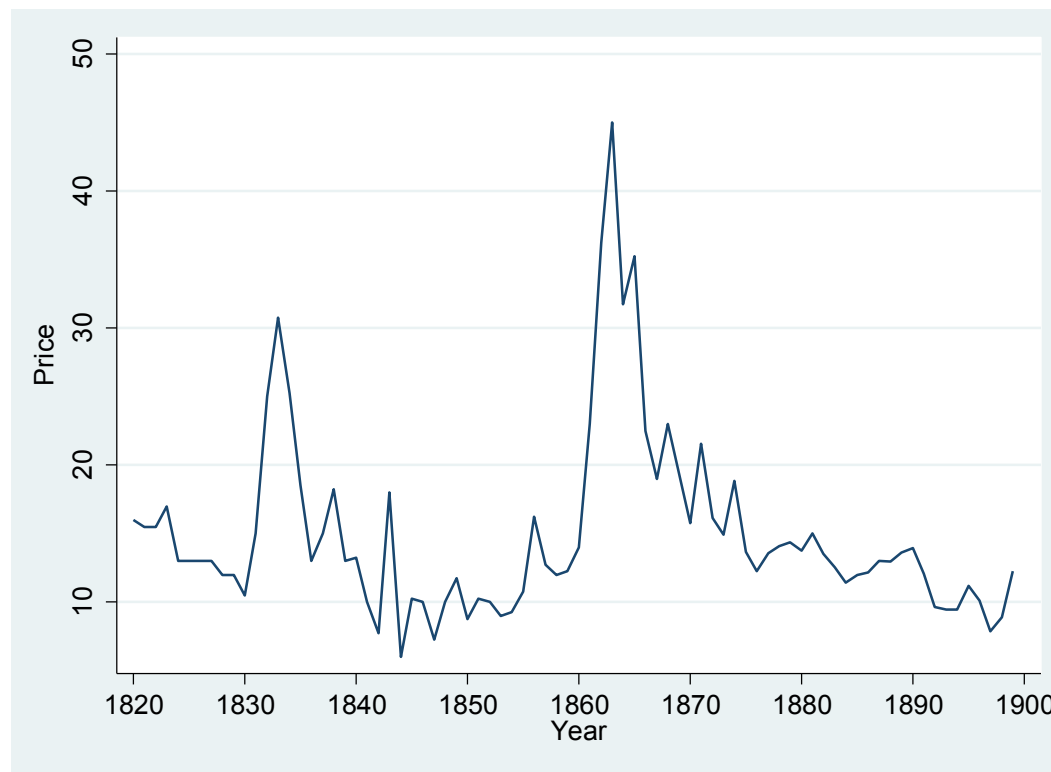


## IV. Background: Rural Egypt's Labor and Land Markets

- Ali monopolized internal and international trade in all major crops in 1808-1842. During this period, farmers were relatively “immune” from the world market shocks. After 1842, exporters became allowed to buy crops from farmers directly.
- Farmers were “free” but tied to villages since antiquity (similar to feudalism). Imported slaves in rural Egypt were very limited until the 1860s. Slaves were blacks (Sudanese: places South of Nubia), brown (Abyssinians), and whites.
- The vast majority of agricultural land in Egypt was “state-owned” since the Islamic Conquest in 640 and until 1891 with only usufruct rights to farmers. However, large estates were granted under Ali and his successors forming the nucleus of private ownership (1847 and 1858 land codes).

# Figure: Prices of Egypt's Major Export Crops in 1800-1900

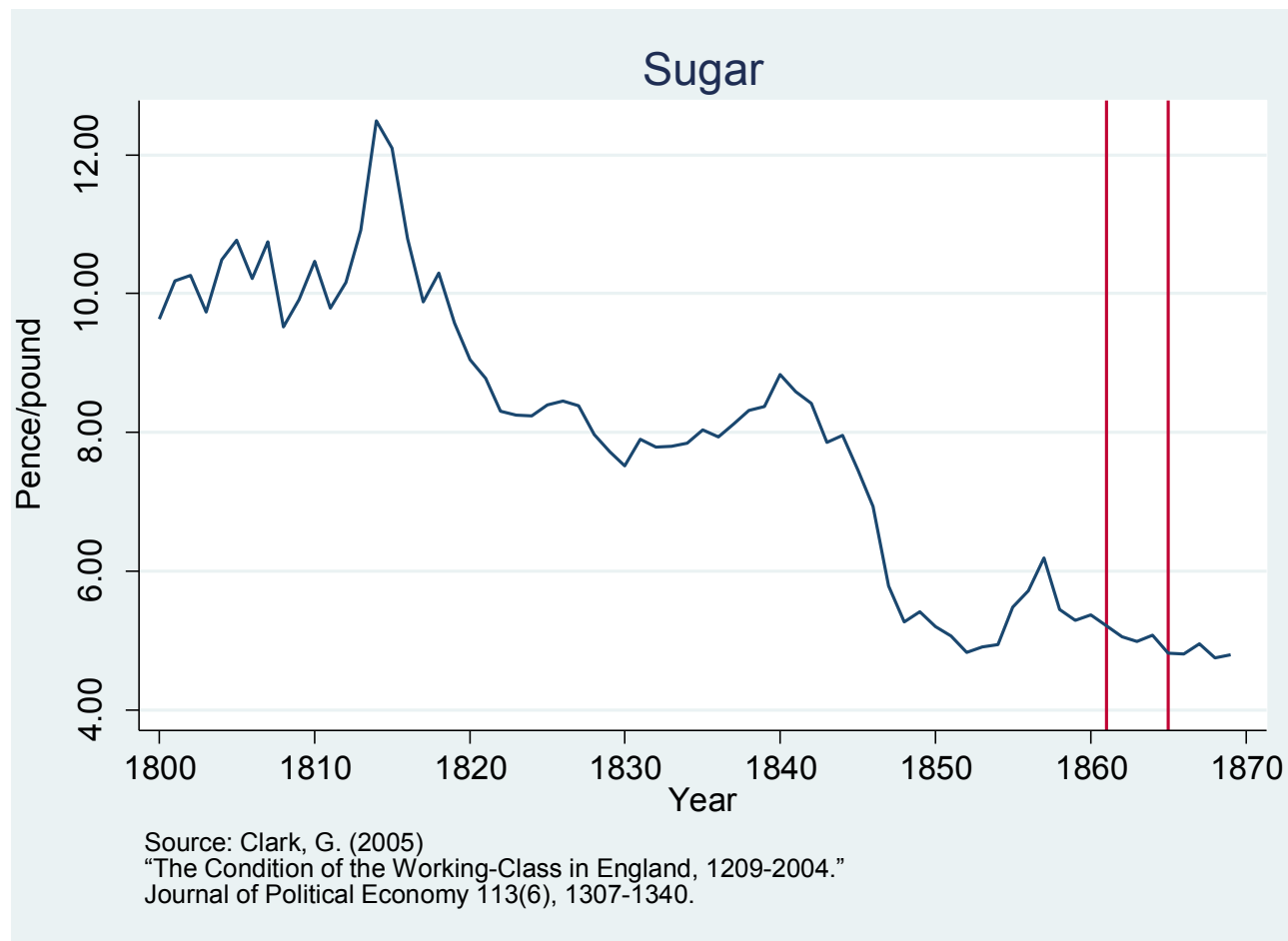
## 1. Price of Egyptian Cotton in Alexandria Port in 1820-1899



Source: Issawi, Charles. "The Movement of Cotton Prices, 1820-1899." In *An Economic History of the Middle East and North Africa*, 446-447. New York: Columbia University Press, 1982. Prices are in US dollars per *qantar* of cotton at Alexandria.

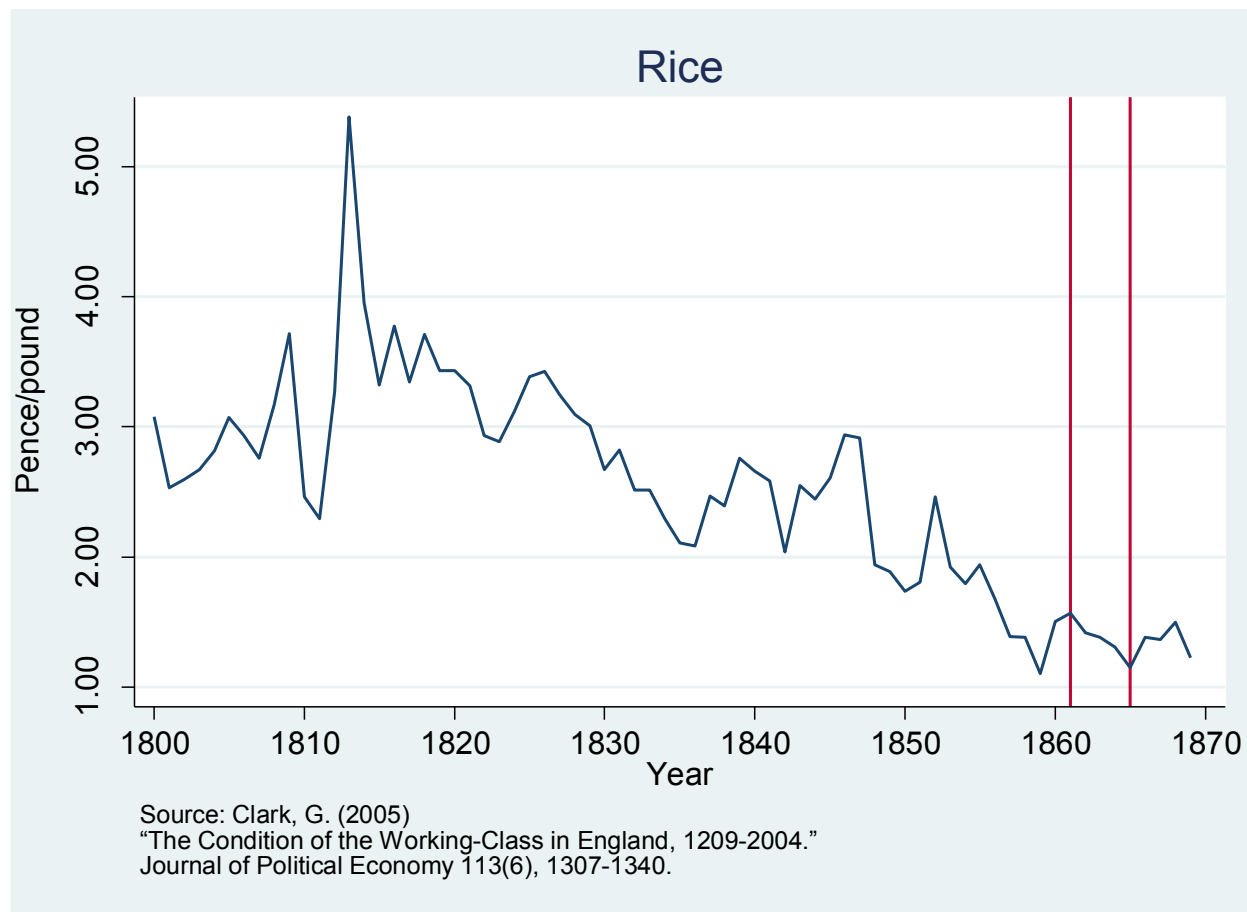
# Figure: Prices of Egypt's Major Export Crops in 1800-1900

## 2. Price of Sugar in England in 1800-1870



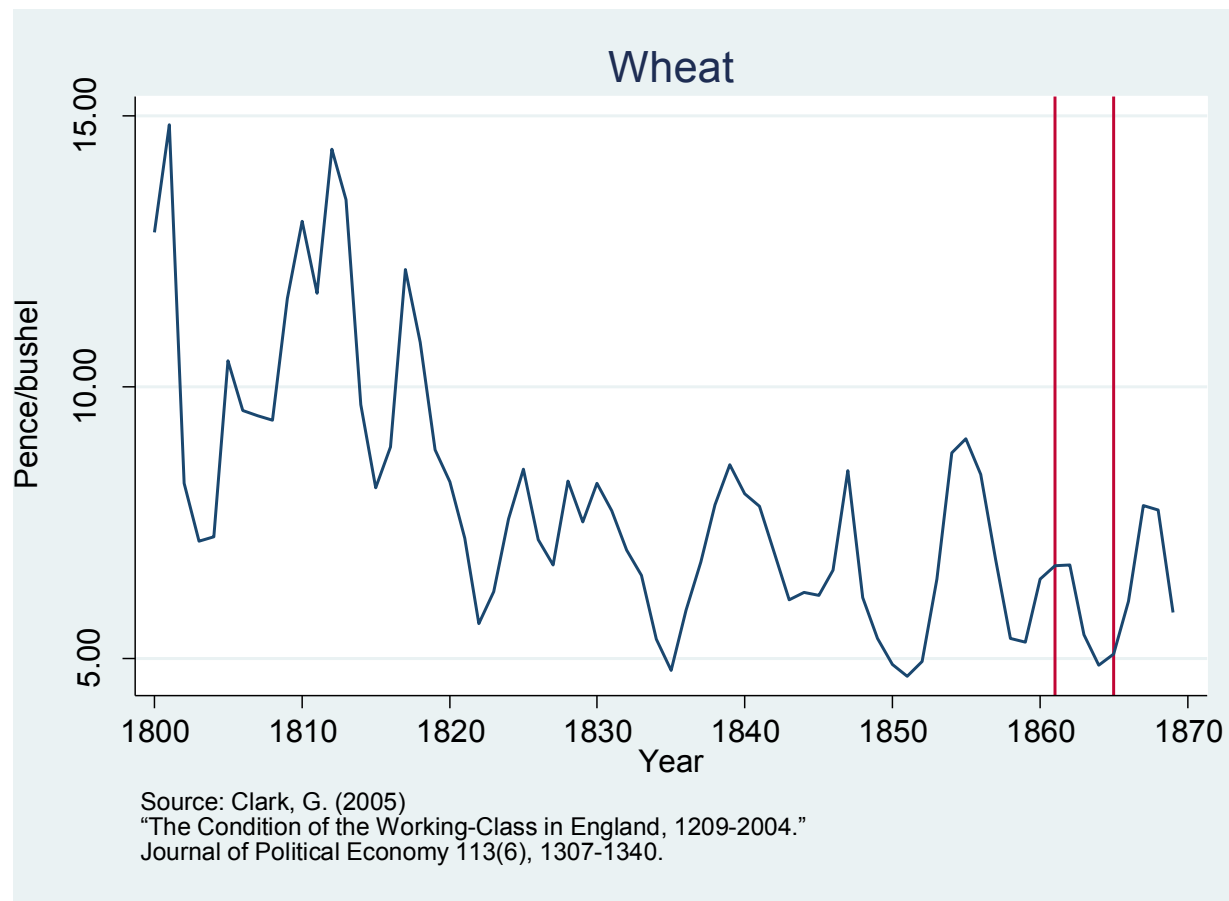
# Figure: Prices of Egypt's Major Export Crops in 1800-1900

## 3. Price of Rice in England in 1800-1870



# Figure: Prices of Egypt's Major Export Crops in 1800-1900

## 4. Price of Wheat in England in 1800-1870



# Interpretation

- Only cotton and wheat witnessed price booms between 1848 and 1868.
  - Cotton because of the American Civil War and wheat because of the abolition of the corn laws in England and the Crimean War.

## V. Data and Empirical Strategy

- I aggregated the data to the district-level in order to match rural districts between 1848 and 1868.
- Matching resulted in 25 districts, 8 in the Nile Delta and 17 in the Nile Valley (out of 71 districts in 1848). The low matching rate is because the 1868 census only covered a few provinces.
- Outcomes: 1. Slave population share, 2. Percentage of slave-owning HHs, 3. Percentage of free Egyptian immigrants (born outside province), 4. Share of hamlets (out of total number of settlements).
- I employ a simple difference-in-differences approach where I compare the change in 1848-1868 in the outcome of interest across cotton-favorable and cotton-unfavorable districts.

## V. Data and Empirical Strategy

- I estimate the following OLS regression:

$$\begin{aligned} (1) \quad & y_{jt} \\ &= \alpha_{1j} + \alpha_2 Postboom_t + \alpha_3 (Cotton_j \times Postboom_t) + \alpha_4 (Sugar_j \times Postboom_t) \\ &+ \alpha_5 (Rice_j \times Postboom_t) + \mathbf{X}'_{jt} \alpha_6 + \varepsilon_{jt} \end{aligned}$$

- Where  $y_{jt}$  is the outcome of district  $j$  in year  $t$  ( $t = 1848$  or  $1868$ );  $\alpha_{1j}$  are district fixed effects;  $Postboom_t$  is dummy variable for the 1868 census (i.e. after the cotton boom);  $Cotton_j$ ,  $Sugar_j$ , and  $Rice_j$  are time-invariant variables that measure the geographic favorability of district  $j$  to the plantation of long-staple cotton, sugarcane, and rice respectively;  $\mathbf{X}$  is a vector of district-level time-varying controls; and  $\varepsilon$  is an error term.



## V. Data and Empirical Strategy

- I use three alternative measures of geographic favorability to cotton plantation:
  - (a) A dummy variable that takes the value of one for districts in the Nile Delta (8 districts). This presumably captures the relative availability of perennial irrigation that was necessary for the plantation of cotton (a summer crop).
  - (b) A dummy variable that takes the value of one for districts along the Damietta branch of the Nile (East Delta) (4 districts). This presumably captures soil quality that was most favorable to long-staple cotton according to Gliddon (1841, pp. 15-18).
  - (c) District's average temperature in 1900-1930 in March and April, which are the months where long-staple cotton is sowed (Gliddon 1841). Cotton plantation required milder temperatures.

## V. Data and Empirical Strategy

- I measure favorability to sugarcane by a dummy variable for districts in the Middle and Southern Nile Valley.
- I measure favorability to rice by a dummy variable for districts in the Northern Delta.
- I use the following time-varying controls: % non-Muslims, % females, % under 10 years of age, and % above 60.
- Cotton, rice, and sugarcane are labor- and effort-intensive crops, and hence conducive to slavery. Wheat is land-intensive and thus conducive to free labor.
- I predict that slavery should increase in cotton-favorable districts, but not in sugarcane- or rice-favorable districts. Since wheat was planted everywhere, the omitted group here is districts favorable to wheat only.

## VI. Findings:

# Difference-in-Differences Tables

- I first show the difference-in-differences tables on slavery and land inequality.
- I contrast the change between 1848 and 1868 in outcomes in the Nile Delta (favorable to long-staple cotton) and the Nile Valley (not favorable to long-staple cotton).
- I report each region's mean, computed across districts, and standard error of the mean. I report the t-test for differences between group means.

## I. Difference-in-Differences Table on Slavery: Change in slave and black population share between 1848 and 1868 in the Nile Delta and Valley

	1848	1868	Diff (1868-1848)
Valley	.017 (.004)	.0147 (.004)	-.001 (.005)
Delta	.001 (.001)	.045 (.006)	.0433*** (.006)
Diff	-.014** (.006)	.0305*** (.007)	.0447*** (.009)

- Means and standard errors are reported. The mean is computed across districts of each region.
- Although the Nile Valley had initially greater share of the slave and black population than the Nile Delta in 1848, the latter witnessed a greater *increase* in the share of its slave population between 1848 and 1868.

## II. Difference-in-Differences Table on Land Inequality: Change in share of hamlets or large estates between 1848 and 1868 in the Nile Delta and Valley

	1848	1868	Diff (1868-1848)
Valley	.048 (.018)	.062 (.025)	.014 (.031)
Delta	.064 (.019)	.131 (.054)	.067 (.057)
Diff	.016 (.029)	.069 (.052)	.053 (.060)

- Means and standard errors are reported. The mean is computed across districts of each region.
- The Nile Delta witnessed a greater (but not statistically significant) *increase* in the share of hamlets or large agricultural estates between 1848 and 1868.

## VI. Findings:

### B. Regressions

- I now turn to the regression results where I add the control variables, and I use the three alternative measures for the geographic favorability to cotton plantation.
- Overall, the regression results show that districts that were more geographically favorable to cotton plantation witnessed:
  1. Greater increase in slave population share and percentage of slave-owning HHs between 1848 and 1868.
  2. Greater increase in the share of immigrants perhaps suggesting that farmers in cotton-favorable districts imported local free labor as well.
  3. Greater increase between 1848 and 1868 in land inequality measured by the share of hamlets or large agricultural estates.
- Sugarcane and rice districts witnessed no change with respect to these outcomes.

**Table. Dependent variable is slave population share**

	(1)	(2)	(3)	(4)	(5)	(6)
1868 Dummy	-0.00139 (0.00415)	0.00619 (0.00518)	0.304 <sup>***</sup> (0.109)	0.000540 (0.00384)	0.000913 (0.00514)	0.302 <sup>**</sup> (0.150)
Delta * 1868 Dummy	0.0447 <sup>***</sup> (0.00730)			0.0475 <sup>***</sup> (0.00993)		
Damietta * 1868 Dummy		0.0420 <sup>***</sup> (0.00889)			0.0386 <sup>***</sup> (0.0106)	
Temperature * 1868 Dummy			-0.0157 <sup>**</sup> (0.00580)			-0.0156 <sup>*</sup> (0.00794)
Sugarcane * 1868 Dummy				-0.00609 (0.0111)	-0.00760 (0.0122)	-0.0106 (0.0149)
Rice * 1868 Dummy				-0.0101 (0.0108)	0.000697 (0.0217)	-0.0185 (0.0241)

Table. Dependent variable is slave population share

% Non-Muslims				-0.0229 (0.0781)	-0.0520 (0.0538)	-0.0472 (0.0712)
% Below 10				-0.0433 (0.115)	0.0109 (0.108)	0.0336 (0.132)
% Above 60				0.0168 (0.136)	-0.268 (0.161)	-0.192 (0.144)
% Females				-0.0118 (0.120)	0.221 (0.168)	0.166 (0.170)
Constant	-0.000342 (0.00302)	0.0182 (0.0192)	0.00531 (0.00720)	0.0228 (0.0653)	-0.0762 (0.0723)	-0.0667 (0.0816)
District FE?	Yes	Yes	Yes	Yes	Yes	Yes
Observations	50	50	50	50	50	50
$R^2$	0.813	0.675	0.625	0.822	0.769	0.698
Adjusted $R^2$	0.602	0.308	0.202	0.488	0.335	0.130

Robust standard errors are in parentheses

\*p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01



**Table. Dependent variable is percentage of slave-owning households**

	(1)	(2)	(3)	(4)	(5)	(6)
1868 Dummy	-0.00145 (0.00342)	0.0193 (0.0115)	0.769 <sup>*</sup> (0.375)	0.00346 (0.00833)	0.0115 (0.0140)	0.776 <sup>*</sup> (0.433)
Delta * 1868 Dummy	0.109 <sup>***</sup> (0.0179)			0.123 <sup>***</sup> (0.0170)		
Damietta * 1868 Dummy		0.0872 <sup>***</sup> (0.0230)			0.0720 <sup>^</sup> (0.0342)	
Temperature * 1868 Dummy			-0.0396 <sup>^</sup> (0.0199)			-0.0401 (0.0231)
Sugarcane * 1868 Dummy				-0.00465 (0.0112)	-0.0159 (0.0215)	-0.0165 (0.0220)
Rice * 1868 Dummy				-0.00617 (0.0525)	0.0312 (0.0758)	-0.0269 (0.0886)

Table. Dependent variable is percentage of slave-owning households

% Non-Muslims				0.00339 (0.0434)	-0.0696 (0.0913)	-0.0595 (0.0807)
% Below 10				0.152 (0.146)	0.297 (0.201)	0.350 (0.218)
% Above 60				0.415 <sup>**</sup> (0.188)	-0.295 (0.175)	-0.125 (0.201)
% Females				-0.250 (0.243)	0.297 (0.508)	0.210 (0.486)
Constant	0.0278 (0.0303)	0.0717 (0.0750)	0.0406 (0.0450)	0.0666 (0.123)	-0.174 (0.242)	-0.165 (0.239)
District FE?	Yes	Yes	Yes	Yes	Yes	Yes
Observations	50	50	50	50	50	50
$R^2$	0.875	0.650	0.655	0.900	0.747	0.725
Adjusted $R^2$	0.734	0.254	0.265	0.711	0.270	0.207

Robust standard errors are in parentheses

\*p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01

**Table. Dependent variable is share of immigrants**

	(1)	(2)	(3)	(4)	(5)	(6)
1868 Dummy	-0.0655 <sup>***</sup> (0.0203)	-0.0511 <sup>**</sup> (0.0227)	0.664 <sup>*</sup> (0.337)	-0.0754 <sup>*</sup> (0.0396)	-0.0767 <sup>*</sup> (0.0392)	1.272 <sup>*</sup> (0.693)
Delta * 1868 Dummy	0.113 <sup>**</sup> (0.0455)			0.177 <sup>***</sup> (0.0540)		
Damietta * 1868 Dummy		0.136 <sup>***</sup> (0.0303)			0.154 <sup>***</sup> (0.0471)	
Temperature * 1868 Dummy			-0.0373 <sup>^</sup> (0.0183)			-0.0703 <sup>^</sup> (0.0376)
Sugarcane * 1868 Dummy				-0.00361 (0.0434)	-0.00649 (0.0383)	-0.0150 (0.0459)
Rice * 1868 Dummy				-0.0962 <sup>^</sup> (0.0528)	-0.0594 (0.0839)	-0.152 (0.110)

Table. Dependent variable is share of immigrants

% Non-Muslims				-0.258 (0.304)	-0.368 (0.238)	-0.348 (0.285)
% Below 10				-0.565 (0.475)	-0.365 (0.420)	-0.267 (0.528)
% Above 60				0.796 (0.468)	-0.273 (0.430)	0.0503 (0.456)
% Females				0.532 (0.888)	1.421 (1.101)	1.213 (1.149)
Constant	0.0351 (0.0467)	0.0845 <sup>***</sup> (0.0148)	0.0509 <sup>*</sup> (0.0291)	-0.0388 (0.447)	-0.413 (0.527)	-0.382 (0.564)
District FE?	Yes	Yes	Yes	Yes	Yes	Yes
Observations	50	50	50	50	50	50
$R^2$	0.573	0.557	0.477	0.700	0.663	0.594
Adjusted $R^2$	0.090	0.057	-0.114	0.134	0.030	-0.169

Robust standard errors are in parentheses

\* $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Table. Dependent variable is share of hamlets or large agricultural estates

	(1)	(2)	(3)	(4)	(5)	(6)
1868 Dummy	0.0144 (0.0201)	0.0146 (0.0269)	0.292 (0.411)	0.0286 (0.0345)	0.0234 (0.0302)	0.651 (0.713)
Delta * 1868 Dummy	0.0530 (0.0678)			0.0962 (0.0858)		
Damietta * 1868 Dummy		0.104 <sup>*</sup> (0.0582)			0.101 (0.0630)	
Temperature * 1868 Dummy			-0.0140 (0.0220)			-0.0323 (0.0379)
Sugarcane * 1868 Dummy				0.000253 (0.0511)	0.00329 (0.0480)	-0.00863 (0.0481)
Rice * 1868 Dummy				-0.0438 (0.0951)	-0.0297 (0.0538)	-0.0619 (0.114)

**Table. Dependent variable is share of hamlets or large agricultural estates**

% Non-Muslims				0.215 (0.217)	0.154 (0.219)	0.166 (0.230)
% Below 10				0.368 (0.529)	0.474 (0.479)	0.525 (0.545)
% Above 60				1.958 <sup>**</sup> (0.872)	1.360 <sup>*</sup> (0.740)	1.537 <sup>**</sup> (0.727)
% Females				0.463 (0.986)	0.982 (1.087)	0.825 (1.146)
Constant	-0.00369 (0.0739)	0.0227 (0.0412)	0.00581 (0.0596)	-0.468 (0.540)	-0.681 (0.590)	-0.650 (0.615)
District FE?	Yes	Yes	Yes	Yes	Yes	Yes
Observations	50	50	50	50	50	50
$R^2$	0.638	0.660	0.626	0.768	0.772	0.750
Adjusted $R^2$	0.230	0.276	0.203	0.332	0.344	0.280

Robust standard errors are in parentheses

\*p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01

# Comparing Cotton, Sugarcane, and Rice

- I finally regress the four outcomes on a regression with cotton (Damietta branch dummy), sugarcane, and rice dummy variables in order to understand how these districts compared on outcomes in 1848.
- It appears that sugarcane-favorable districts had higher slave population share and lower share of hamlets in 1848.

Table. Dependent variable is slavery, % slave-owning HHs, % immigrants, and share of hamlets

	(1)	(2)	(3)	(4)
Damietta	-0.00346 (0.00253)	-0.00695 (0.00642)	-0.0906*** (0.0265)	-0.0357 (0.0238)
Sugarcane	0.0166** (0.00738)	0.00992 (0.00813)	-0.0130 (0.0344)	-0.0717*** (0.0260)
Rice	-0.000197 (0.00490)	-0.00176 (0.0111)	-0.0118 (0.0221)	0.0151 (0.0310)
1868 Dummy	0.0112 <sup>^</sup> (0.00567)	0.0296 <sup>^</sup> (0.0148)	-0.0449 (0.0359)	0.0314 (0.0479)
Damietta * 1868 Dummy	0.0351*** (0.00960)	0.0672** (0.0292)	0.138*** (0.0325)	0.0954 (0.0776)
Sugarcane * 1868 Dummy	-0.0140 (0.0115)	-0.0317 <sup>^</sup> (0.0172)	-0.0124 (0.0413)	-0.0400 (0.0487)
Rice * 1868 Dummy	0.00767 (0.0153)	0.0393 (0.0642)	-0.0311 (0.0318)	-0.0317 (0.0895)
Constant	0.00632*** (0.00188)	0.0154*** (0.00528)	0.105*** (0.0300)	0.0804*** (0.0245)
Observations	50	50	50	50
R <sup>2</sup>	0.411	0.463	0.210	0.271
Adjusted R <sup>2</sup>	0.313	0.374	0.078	0.149



## VII. Next Steps

- So far, I showed econometric evidence on the short-term impact of the cotton boom on slavery and land inequality between 1848 and 1868.
- Slavery is unlikely to have had a long-lasting effect.
  1. At its peak, slavery did not exceed 5 percent of the population, and was a very short-lived institution.
  2. Although I am unable to follow slaves after their emancipation in the subsequent village-level population censuses in 1882-2006 (ethnicity is not recorded), historical evidence suggests that many slaves returned back to their countries of origin after emancipation, and many others were married to free women and were hence assimilated to the local population.
- But did the hierarchical organization of labor and the increased land inequality persist in these districts after the abolition of slavery in 1877? Did cotton, sugarcane, and rice districts had different outcomes in the long-run?



Thank you!