ECON 272: Economic History of North America to 1913

The Economics of Slavery and the Southern Economy

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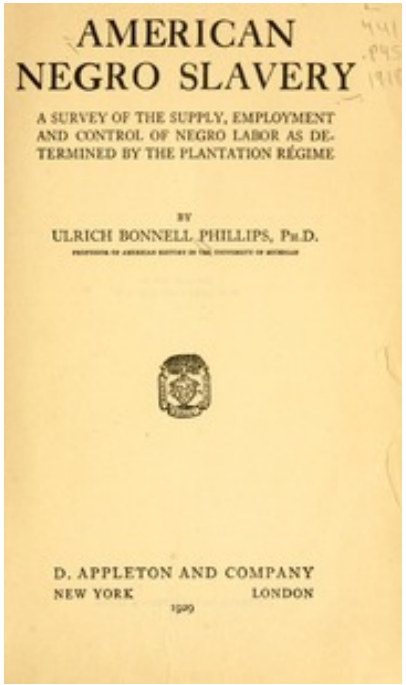
Outline

1. The Phillips Tradition
   - Not very profitable?
2. Disentangling viability/profitability from efficiency
   - Model of Exploitation
   - Rate of Expropriation
3. Efficieny
   - What is efficiency?
   - Altered Behavior
   - Tax on Leisure
   - Institutional Pollution and Delegation of Costs (e.g. Slave patrols)
   - Southern Economic Growth
   - A short bifurcation
4. The role of runaways
5. A Quick Bifurcation on Canada

The profitability of the peculiar institution



- Ulrich Phillips (1918) is really a strange starting point for the literature. First, many of his works such as *Life and Labor in the Old South* are still the end word on many things.
- Second, he is quite overtly racist.
- Third, he ended up supporting the viewpoint made by "classical opponents of slavery" (J.B. Say, Adam Smith, John Stuart Mill).

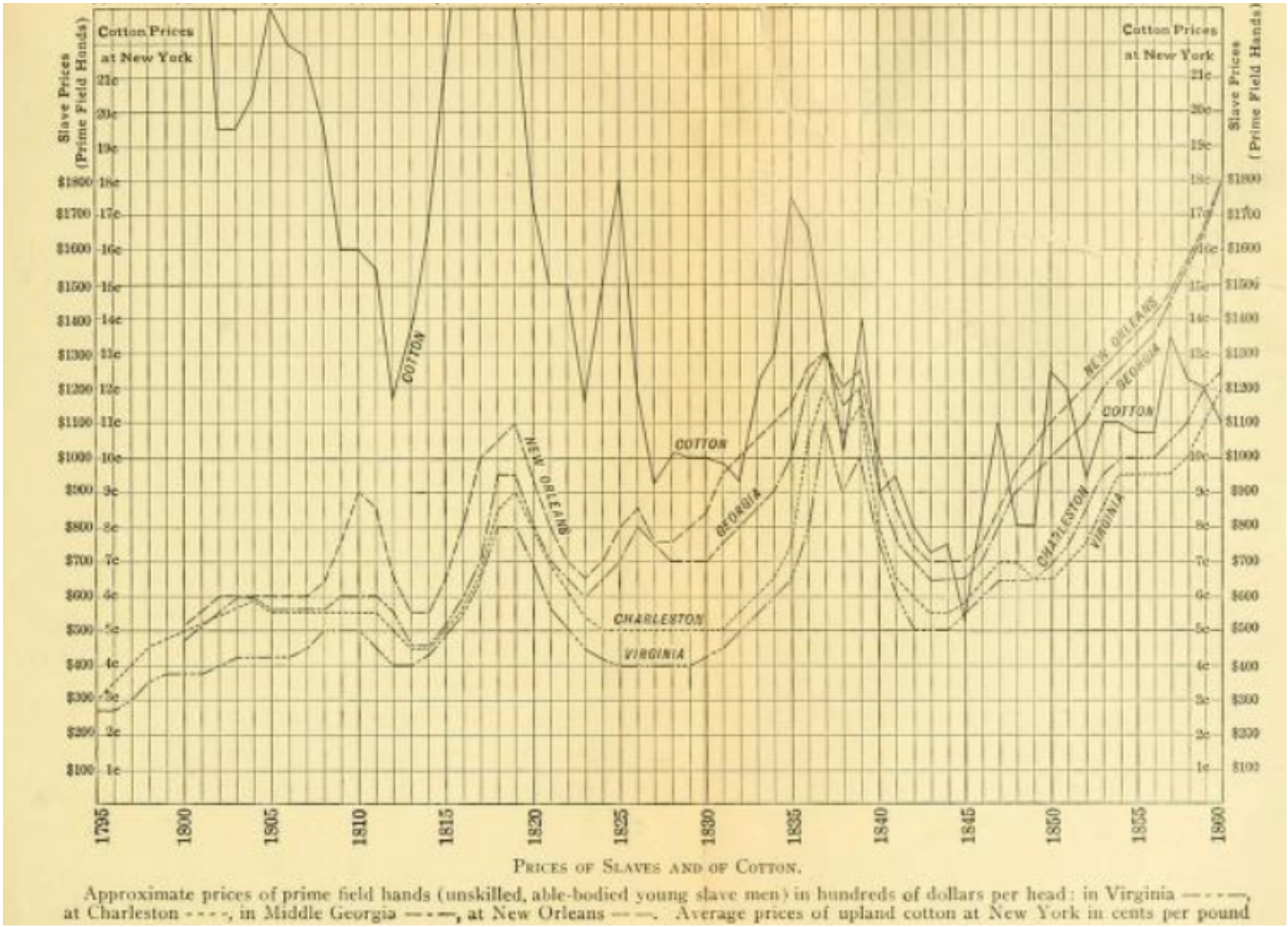
- The classical economists argued that slavery was inefficient but debated whether or not it was profitable (which went to the point of viability).
- Phillips, although he did not share the premise that blacks were more than "savage and barbarous men" (Phillips, 1918, 344), confirmed the classical view - slavery was both unprofitable and inefficient (echoing *Impeding the Crisis of the South* (Helper, 1857).

The profitability of the peculiar institution

The planters, who were the principal Southern capitalists, trod in a vicious circle. They bought lands and slaves wherewith to grow cotton, and with the proceeds ever bought more slaves to make more cotton; and oftentimes they borrowed heavily on their lands and slaves as collateral in order to enlarge their scale of production the more speedily. When slave prices rose the possessors of those in the cotton belt seldom took profit from the advance, for it was a rare planter who would voluntarily sell his operating force. When crops failed or prices fell, however, the loans might be called, the mortgages foreclosed, and the property sold out at panic levels. Thus while the slaves had a guarantee of their sustenance, their proprietors, themselves the guarantors, had a guarantee of nothing. By virtue, or more properly by vice, of the heavy capitalization of the control of labor which was a cardinal feature of the ante-bellum régime, they were involved in excessive financial risks.

The slavery system has often been said to have put so great a stigma on manual labor as to have paralyzed the physical energies of the Southern white population. This is a great exaggeration; and yet it is true that the system militated in quite positive degree against the productivity of the several white classes.

The profitability of the peculiar institution

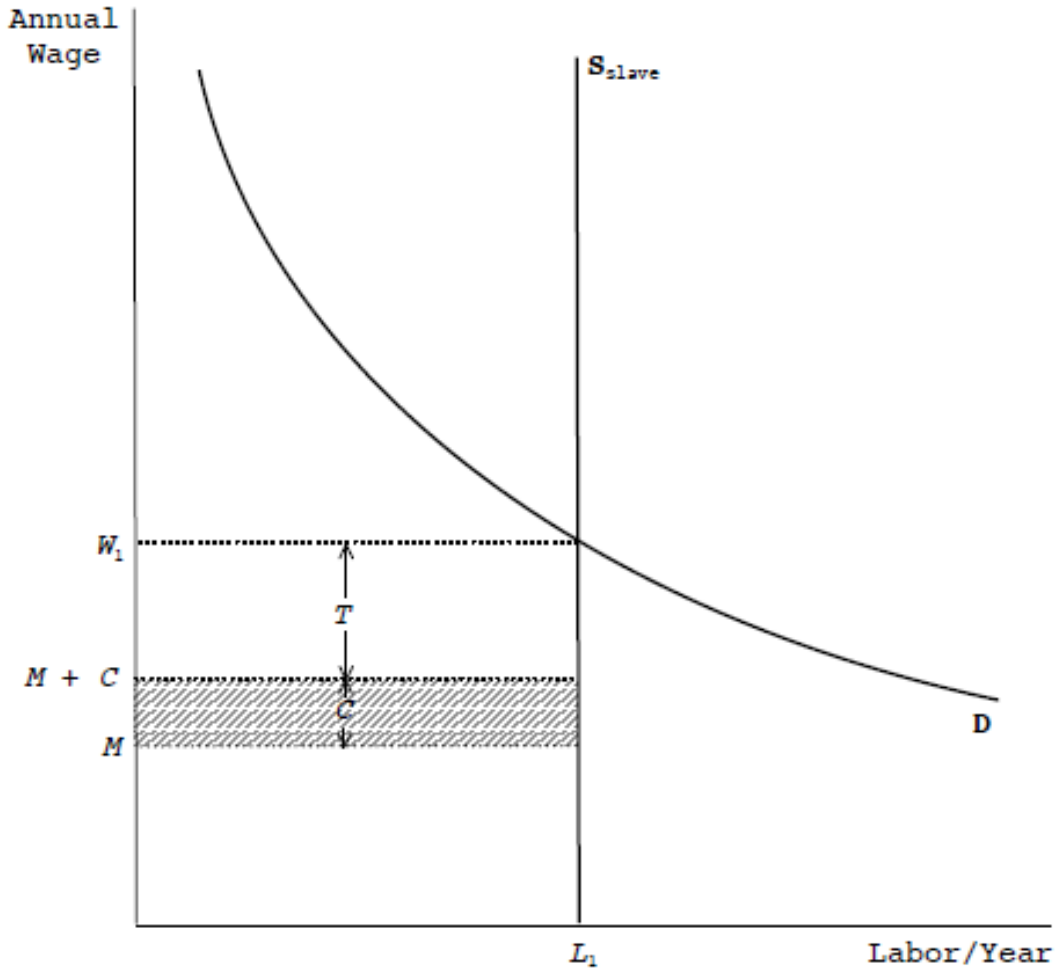


PRICES OF SLAVES AND OF COTTON.

Approximate prices of prime field hands (unskilled, able-bodied young slave men) in hundreds of dollars per head: in Virginia — · — ·, at Charleston · · · ·, in Middle Georgia — — —, at New Orleans — —. Average prices of upland cotton at New York in cents per pound

Model of Exploitation

Figure: Slavery Model



Model of Exploitation

- At wage W_1, supply and demand are in line and the wage rate reflects the opportunity cost of the last unit of labor provided. In a market without coercion, this entails that the marginal product of labor (MPL) is in line with wages (there are also few principal-agent problems - which in our case as we will speak to the issue of passive resistance and runaways).
- However, thanks to the use of coercion, the demander is able to offer less than W_1 and sets M as the "payment" (subsistence) offered to slave (which is the cost to him rather than the utility slave obtain). For now, we will ignore C (enforcement costs generated by the divorce between MPL and M).
- The difference between M and W_1 is T which is the transfer between the value of what a slave produces and how less than his MPL the slave obtains.

Model of Exploitation

- The T can be assigned in a normal discounting identity to measure the returns of slaves under a simple measurement identity that you have seen in intro micro:

$$\tau = \frac{T}{(1+\lambda)^n} \tag{1}$$

- Where τ is the price of a slave, T is the net product (annual net revenues), λ is the interest rate and n is the number of time periods of activity of a slave. (see next slides) and also entails that there like any assets with different maturities, there is an "age profile" of slave prices (see slide after next).

Model of Exploitation

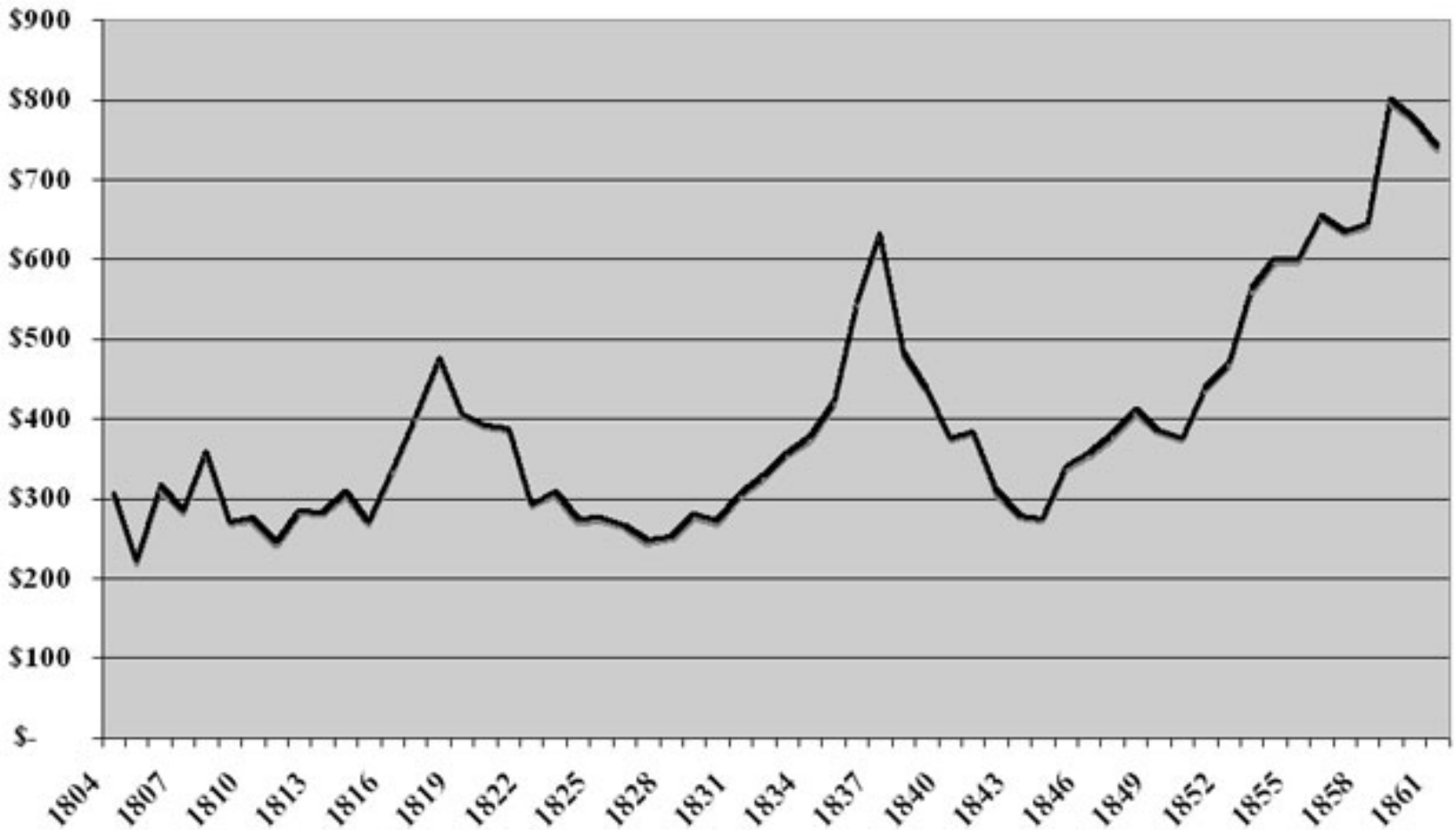
Figure: Slave prices in South Carolina (Mancall et al., 2001).

FIGURE 1
FIVE-YEAR MOVING AVERAGE OF NOMINAL AND REAL SLAVE PRICE INDEXES

Source: Table 1.

Model of Exploitation

Figure: Slave prices in the United States (Williamson and Cain, 2016)



Model of Exploitation

Figure: Returns from slavery according to Conrad and Meyer (1958)

TABLE 10

ANNUAL RETURNS ON A PRIME FIELD WENCH INVESTMENT (WORKING ON LAND WHICH YIELDED 3.75 BALES PER PRIME MALE FIELD HAND, ASSUMING A 7.5-CENT NET FARM PRICE FOR COTTON AND TEN "SALABLE" CHILDREN BORN TO EVERY WENCH)

Year from Purchase Date	Personal Field Returns	Child Field Returns	Child Sale Returns	Personal Upkeep	Child Upkeep	Net Returns
1	$56	.....	....	$20	....	$ 36
2	40	.....	....	20	$ 50	−30
3	56	.....	....	20	10	26
4	40	.....	....	20	60	−40
5	56	.....	....	20	20	16
6	40	.....	....	20	70	−50
7	56	.....	....	20	30	6
8	40	$ 3.75	....	20	80	−56.25
9	56	7.50	....	20	45	−1.50
10	40	15.00	....	20	95	−50.00
11	56	22.50	....	20	60	−1.50
12	40	37.50	....	20	110	−52.50
13	56	52.50	....	20	75	13.50
14	40	75.00	....	20	130	−35.00
15	56	97.50	....	20	95	47.50
16	40	127.50	....	20	150	−2.50
17	56	157.50	....	20	115	78.50
18	40	195.00	....	20	165	55.00
19	56	232.50	....	20	130	134.30
20	40	195.00	$875	20	170	920.00
21	56	232.50	....	20	130	138.50
22	56	195.00	875	20	120	986.00
23	56	232.50	....	20	120	148.50
24	56	195.00	875	20	110	996.00
25	56	232.50	....	20	110	158.00
26	56	195.00	875	20	100	1,006.00
27	56	232.50	....	20	100	168.00
28	56	187.50	875	20	90	1,008.50
29	56	225.00	....	20	90	171.00
30	56	180.00	875	20	80	1,011.00
31	...	210.00	....	...	80	130.00
32	...	157.50	875	...	60	972.50
33	...	180.00	....	...	60	120.00
34	...	120.00	875	...	40	955.00
35	...	135.00	....	...	40	95.00
36	...	67.50	875	...	20	922.50
37	...	75.00	....	...	20	55.00
38	...	.....	875	...	....	875.00

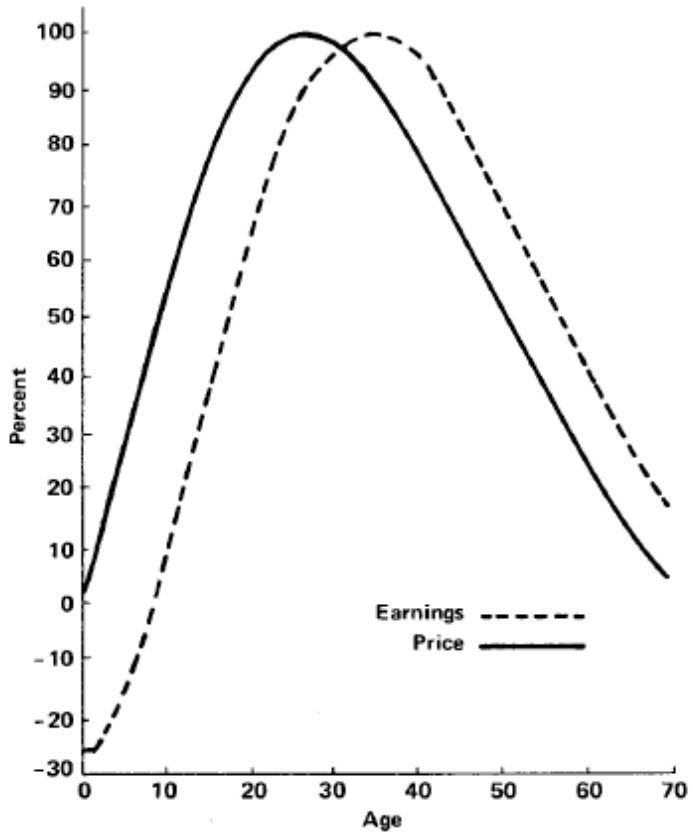
Model of Exploitation

Figure: Age profile prices for slaves and earnings from slaves (Fogel, 1989)

FIGURE 2.2:

Price and Earnings Profiles of Male Slaves in the Old South

(as percent of peak–year price and earnings)



Model of Exploitation

- Here it is important to realize that if T increases because demand for slave-produced goods increases, there is an incentive to increase the slave population until the price of slave realigns with marginal productivity of labor: "In the short-run, shifts in world demand and advances in agricultural techniques may have raised the value of the marginal product of labor, but the long-run supply response shifted labor supply outward until the value of labor's marginal product was brought back into line with international slave prices" (Mancall et al., 2001, 636-7)
- This could be done, pre-19th century, by the importing of slaves and/or the breeding of new slaves (thus a part of slave prices were explained by child-bearing ages - 8% to 10% of the price of female slaves was due by this factor according to Fogel (1989, 365))

Model of Exploitation

- Additionally, the system could easily expand but could also contract to realign prices - if slave-based products saw their demand fall, slave-owners would see the price of slaves fall to restore profitability (because T falls). Capital owners suffer losses but production continues as long as M is smaller than W_1. (Yasuba, 1961).
- Slavery could thus expand with demand (westward expansion) and could withstand declines in demand.

Rate of Expropriation

- As soon as you have two of the following (T, W_1 and or M), you can estimate E (Expropriation).
- Fogel and Engerman (1974) used estimates of M and their estimated W_1 (see slide with age-specific earnings profile graph) to derive T. Vedder (1975) and Ransom and Sutch (2001) used data on W_1 and M to derive T.
- The expropriation rates are gigantic (between 49% and 65%). How can we reconcile this with profitability and efficiency?
- **A hint to answer**: M is estimated at between 20$ and 30$ per slave per year. Do you think a slave would have preferred 20$ to 30$ in cash or in the in-kind form he obtained this transfer? If you think so, you are on the right track to understanding the need to divorce profitability/viability from efficiency.

Model of Exploitation

TABLE 2.1
Undiscounted Estimates of Slave Exploitation for 1860

	VEDDER	RANSOM–SUTCH		FOGEL–ENGERMAN		
		Based on Farm Income		Based on Slave Prices	Based on Farm Income	
		All Slave Farms	Large Plantations		All Slave Farms	Large Plantations
Labor Share	42.0%	49.0%	53.3%		58.0%	58.0%
Labor Income /Year(W)	$85.76	$62.46	$78.78		$73.98	$85.80
Slave Consumption /Year (M)	30.00	28.95	32.12		34.13	42.99
Transferred Income /Year (T)	55.76	33.51	46.66		39.85	42.81
Rate of Expropriation (E)	65%	54%	59%	49%	54%	50%

Sources: Robert William Fogel and Stanley L. Engerman, *Time on the Cross*, v. 2, *Evidence and Methods: A Supplement* (Boston: Little, Brown, 1974), pp. 125, 159; Richard K. Vedder, "The Slave Exploitation (Expropriation) Rate," *Explorations in Economic History*, 12 (Oct 1975), 453–7; Roger L. Ransom and Richard Sutch, *One Kind of Freedom: The Economic Consequences of Emancipation* (Cambridge, UK: Cambridge University Press, 1977), pp. 2–4, 203–12; Susan Previant Lee and Peter Passell, *A New Economic View of American History: From Colonial Times to 1940*, 1st edn. (New York: W. W. Nortion, 1979), p. 206.

What is efficiency?

- Productive efficiency (...) asks the question, are we producing as much as possible, given the scarcity of the factors of production?
- Allocative efficiency (...) asks the question, are we producing the mix of goods and services that people value most, and are they going to those who value them most, given people's existing preferences?
- Slavery can be productively efficient but allocatively *in*efficient

Cost 1: Altered Behavior

- Slaves were not docile: M being inferior to W_1, slaves would prefer to work less at M than at W_1 (if we remove the simplifying assumption of perfectly inelastic supply of labor in figure above). Given the divorce between W_1 and M, they can only adjust by changing the intensity of their labor. This entails both passive and active resistance which in turn forces slave-owners to expend on C (enforcement).
- Altered the behavior of whites too : redirection of resources into slave capture and supervision which is a cost to this (an ancient equivalent to (Bowles, 2012) on inequality and the cost of guard labor to economic growth - the cost of inequality is that we must expend more to neutralize issues arising from social distance - same with slavery but more extreme).
    - Also helps explain why books like Hinton Rowan Helper's *Impending Crisis of the South* (1857) could be simultaneously racist, anti-slavery and pro-white while also being rejected by slave-owners.

Cost 2: Slavery is a tax on leisure

- Slavery actually incites *overproduction* of the slave-produced goods because it is a tax on the leisure of slaves (Moes, 1961; Fenoaltea, 1984; Barzel, 1977; Hummel, 2012).
- At W_1, more labour would be provided than if wages$=M$, but slave-owners force quantity of labor supplied to be equal to W_1 and thus slaves have *less* leisure.
- This means that the inefficiency of slavery is not poor production, it is in part *over*production.

Cost 3: Slave patrols and fugitive slave laws

- Slave owners delegated C to third parties in both the South (slave patrols) and North (fugitive slave laws). Thus, the enforcement of slavery was a subsidy to them (thus also the weird sentence by confederate vice-president Alexander Stephens that slavery was safer within the Union than outside).
- This is slavery as "pollution" (Wright, 2017). Those who benefit from the institutional arrangements are not those who bear the costs of enforcing the arrangements. For example, slave patrols were mandatory and subjected to fines if the duty went unperformed.
- The cost Southern slave patrols represented roughly 1% of GDP (Hummel, 2012) in the South - see also (Saraydar, 1964; Ransom and Sutch, 2001).

Southern Economic Growth

- There are numerous data issues with how to compute GDP (which are well summarized by Hummel (2012), Cohn (1981), Gallman (1979) and Gunderson (1973)).
- However, the case is pretty clear: the cost was a poorer south than could have otherwise been the case. Moreover, this is in *spite* of the fact that slavery leads to inefficient *over*production measured in GDP. More importantly, Fogel and Engerman tended to focus on growth rates but there are no theoretical reasons for focusing on those as slavery would contaminate Northern growth rates (capital can move around).

Bifurcating on farm efficiency

- The most *hotly* debated point from Fogel and Engerman was that slave farms were more efficient (apparently) than Northern free farms. This caused massive reactions (Anderson and Gallman, 1977; Wright, 1979; Schaefer and Schmitz, 1979; Hanes, 1996)
- Contested on the grounds of *too few hours* (roughly 2000 hours/year as opposed to other estimates of 3000 hours/years (Anderson and Gallman, 1977).
- Contested on the grounds that the Cobb-Douglass function used assumed unitary elasticities and equal elasticities for all (Schaefer and Schmitz, 1979; David and Temin, 1979).
- Contested on the grounds that the year used was a freak year (Cohn, 1981) for cotton crop.
- Contested on the grounds that the prices used were national prices as opposed to farmgate prices (those actually obtained by farmers) (Hummel, 2012).

Runaways

- Runaways were the biggest threat to slavery.

$$\tau = \frac{(1-P)T}{(1+\lambda)^n} \tag{2}$$

- Where τ is the price of a slave, T is the net product (annual net revenues), λ is the interest rate and n is the number of time periods of activity of a slave. P is the probability of runaway.
- Even small Ps could be dramatic for slave-owners.

Runaways

Figure: The effect of P of runaway on prices of slaves

Probability	$i = 10.0\ \%$	$i = 5.0\ \%^{a}$	$i = 15.0\ \%^{b}$	$i = 20.0\ \%$
$p = 0\ \%$	\$1200	\$1200	\$1200	\$1200
$p = 0.01\ \%$	\$1199	\$1197	\$1199	\$1199
$p = 0.10\ \%$	\$1187	\$1175	\$1191	\$1193
$p = 1.0\ \%$	\$1080	\$990	\$1114	\$1131
$p = 5.0\ \%$	\$760	\$570	\$855	\$912
$p = 10.0\ \%$	\$540	\$360	\$648	\$720

Runaways

- Runaway rates were small in aggregate (0.02%) but mich higher when you concentrate on border states and those who could run away (prime-age singles) - 3.3% to 5.6% in Delaware in 1850 and 1860; versus 0.02% in South Carolina and less than that in Alabama.
- The effects can be seen in regional patterns of slave prices (see next slide and see the graph from Phillips (1918) that figures at the beggining of these slides to compare New Orleans to Richmond).
- The preservation of the institution required barriers to runaways not funded by slave-owners - i.e. the slave patrols and the adoption of fugitive slave laws that non-slave states would enforce. Absent those, prices would fall in border states and cause complications in the deeper south (example of the independent Texas and its ties to anti-slavery Britain and the example of Spanish Florida).

Runaways

Figure: The effect of P of runaway on prices of slaves

	Upper South		Lower South	
Period	Hire	Price	Hire	Price
1830-1835	$ 62	$ 521	$ 127	$ 948
1836-1840	106	957		
1841-1845	83	529	143	722
1846-1850	99	709	168	926
1851-1855	141.5	935	167	1,240
1856-1860	142	1,294	196.5	1,658

(Fogel & Engerman, II, 73)

A quick bifurcation on Canada

- Less work has been done on Canadian slavery but it is known that 3/4 of slaves were not blacks, but *panis* (French bastardization of the word *Pawnee*).
- At its peak, 5% of French Canada's population were slaves in one form or another - mostly concentrated in Montreal (Trudel, 2004).
- A similar point is made on Canadian slavery with regards to the necessity of state-support. The main trade for slave (and why the *Panis* were slaves instead of blacks) occurred between tribes who captured members of opposite clans and traded them to the French to secure alliances against the British. While slavery preceded French era within the Natives of North America, the French did stimulate the effort to "harvest" slaves (Rushforth, 2003).

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