Notes on the Efficiency of Slave System

I The Ulrich Phillips Thesis

Slavery inefficient, doomed to die out on economic grounds

Slave prices kept rising in the decades before the Civil War but cotton prices were falling

Slave owners were not capitalistic operating in a competitive capital market

> *Note: under some interpretations slaves provided sexual services for slave owners; in another interpretation slave owners derived a sense of power from controlling slaves and dispatching "feudalistic justice" on their chattel; in another interpretation American slavery became a quasi-caste system*

II The Asset-Pricing Model (Capital Market Efficiency)

Let R(i) be the expected marginal revenue flow from a slave (will vary between males and females) purchased at age i

Note that $R(i) = P_c (MP_{L^*})$ *= price of cotton times the marginal product of labor at age i*

> *This depends upon the expected efficiency of an hours work e(h) and the number of hours the slave works. It is well known in most physically demanding jobs that e(h) and h are inverse to each other; presumably e(h) is also impacted by the incentives (carrots and sticks) operating on a typical plantation*

Let C(i) be the expected costs of maintaining a slave (quartering in housing, feeding and clothing, guarding and supervising in the slave gang system

> *This depends upon the cost of food* p_f *and the costs of clothing among other things*

Let the difference between R(i) and I(i) be the net marginal contribution of a slave to the plantation (net of costs)

Then let $V_{dcpv}(i)$ *be the discounted present value of the net marginal contributions of a slave over the expected lifetime of a slave starting at age i (from age i to the expected life span of a slave* ϵ_0^0 *that is the expected age of death)*

> *Note: This depends on the age of the slave at purchase time. According to the kind of life tables that were relevant in 19th century America life expectancy at birth was low, then rose after infancy before falling thereafter. A rational slave owner might underinvest in the young slaves waiting to see which ones survived.*

The "fittest" would be those that made it through infancy to childhood. This strategy could have a negative impact on the long-run health, physique and intelligence of a slave at maturity.

Use the prevailing interest rate in the United States to discount the expected present value of the net marginal contributions of a slave $V_{dcpv}(i)$

Let the price of a slave at age i be $P_s(i)$

Then for the slave market to be efficient what is required is that:

$V_{dcpv}(i) = P_s(i)$

as a market equilibrium condition

Note: under this interpretation underinvesting in slave health and family life through forced breakup of slave families if the typical plantation owner was not "benevolent" relying more on "sticks" than "carrots" to drive his or her chattel

Note: Future price movements are uncertain. Expectations play a role.

III Fogel/Engerman <u>Time on the Cross</u> (1974): Carrots More Important than Sticks on a Typical Plantation

Background: the Civil Rights movement, Black Pride, the Moynihan report ("Benign neglect", Affirmative Action)

The key arguments of the book:

1. *Slavery was profitable in a competitive American capital market*
2. *Slavery was economically viable*
3. *In the 1850s the expectations for the profitability of the slave system were positive*
4. *Slave plantations were run efficiently as "factories in the field" (total factor productivity was strong because of the slave gang system)*
5. *Slaves worked hard: e(h) was high; so was h*
6. *Slavery was fully compatible with manufacturing; the South could have industrialized with slavery*
7. *The standard of living of slaves was roughly comparable to that of Northern factory workers ("wage slaves") – it was relatively low for everyone in the decades leading up the Civil War, slave and free*

8 *The typical slave family was cohesive, it was not usually broken up by slave sales*

9 *The rate of exploitation of slaves was low*

With these arguments in place, Fogel and Engerman argued slavery could only be ended by a political process driven presumably by moral concerns or a commitment to the Declaration of Independence. Contra Phillips: the Civil War was necessary to rid slavery in the United States