

Who Benefited From North American Slavery?

Economics 113, Fall 2007
U.C. Berkeley

Introduction

Ask a historian, or a political scientist, or a politician the question, “Who benefited from North American slavery?” and the answer you will probably get is, “The slaveholders, of course.” The slaveholders got to work their slaves hard, pay them little, sell what they made for healthy prices, and get rich.

We economists have a different view. Consider North American slaves growing cotton in the nineteenth century. Those slaveholders who owned slaves over the era when it became clear that Cotton would be King—that the British industrial revolution was producing an extraordinary demand for this stuff and that Eli Whitney’s cotton gin meant that it could be produced cheaply—profited immensely as the prices of the slaves they owned rose. But slaveholders who bought their slaves later on, after the magnitude of the demand by factories for cotton was well-known, and who entered the cotton-growing business late—well, they probably profited little if any more than they would have had they invested their money in transatlantic commerce or New England factories or Midwestern land speculation. With the supply of slaves fixed, the excess profits produced—I won’t say earned—by driving your slaves hard were already incorporated in the prices you paid for slaves. If they were not, why would anybody sell slaves?

Moreover, there is another very important group who benefited mightily from North American slavery: consumers of machine-

made cotton textiles, from peasants in Belgium able for the first time to buy a rug to London carters to Midwestern pioneers who found basic clothing the only cheap part of equipping a covered wagon. Slave-grown cotton could be produced cheaply, yes, but the cotton-growers did not collude and so sold their cotton at prices that incorporated only a normal rate of profit. Cotton could be spun and woven by machines at amazingly low prices, yes, but British factories did not collude and sold their garments at prices that incorporated only a normal rate of profit.

And there is yet a third group that benefited: northern and western Americans whose taxes are lower because of the tariffs collected on imports of goods financed by cotton exports.

A lot of surplus was extracted from North American slaves. And the bulk of the surplus went to three places: to the pockets of those who owned slaves when slave prices boomed as the extent to which Cotton was King became clear, to those who could—because of slavery—buy machine-made cotton textiles much cheaper than would otherwise be the case, and to those in the north and west of the United States whose taxes were lower than would otherwise have been the case.

That's the verbal preview of the economic argument. Now let's turn to the argument itself. It will proceed in three stages. First, it will sketch out a picture of what the world in the first half of the nineteenth century would have been like in the absence of North American slavery. Second, it will sketch out a picture of what the world actually looked at. Third, it will compare the two.

The World in the Absence of Slavery

Suppose that there were no North American slavery in the first half of the nineteenth century: in his farewell address George Washington had urged the United States to abolish slavery, and

presidents John Adams and Thomas Jefferson had implemented his desires, compensating slaveowners with government bonds. Britain (and American) textile factories would still have gotten the bulk of their cotton from the American south: India was far and transport costs were high, and while Egypt was close its cotton-growing capacity was limited. The big difference would have been that cotton would have had to have been grown by free American farmers rather than by slaves, and that the price of cotton would have to be high enough to offer those who grew it earnings high enough to attract them out of northern wheat farming.

Let's roll all the costs of growing cotton (including any labor engaged in supervision, storage, transportation, plus normal profits, et cetera) into one variable: the (high) "wage" of American labor growing cotton: w_A . And let's make the constant returns to scale assumption: American land is free and American labor is abundant so that as long as free cotton-growers in America can earn w_A more and more will enter the cotton-growing business, and America can grow as much cotton at the price corresponding to that wage as the world demands.

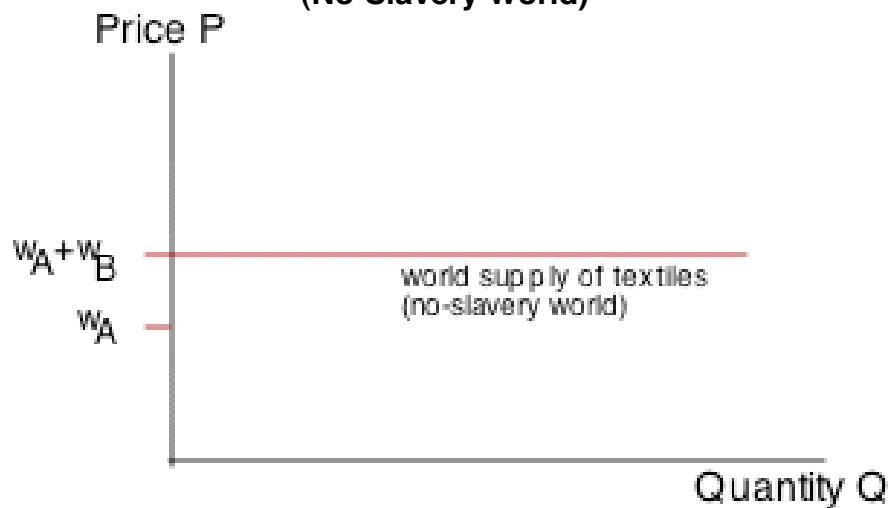
Now let's move across the ocean, and make the same argument for the factories in Britain that spin and weave the cotton into cloth. British capital and labor are abundant, so we can once again assume constant returns to scale. British costs of production can be rolled into one variable, w_B , the "wage" of British cotton-processing labor ((including labor engaged in management, construction of factories, machine-making, machine fixing, storage, transportation, plus normal profits, et cetera).

The assumptions we have made tell us that the world supply of cotton textiles takes a very simple form. It is, with P being the price and Q being the quantity of cotton textiles produced in the world:

$$P = w_A + w_B$$

If the price of cotton textiles were higher, American cotton-growers would earn more than w_A and British cotton-processors would earn more than w_B , more would enter the cotton-growing and cotton-processing businesses, and production would expand. If the price of cotton textiles were lower, American cotton-growers would earn less than w_A and British cotton-processors would earn less than w_B , some would exit the cotton-growing and cotton-processing businesses, and production would contract. The world supply of cotton textiles is perfectly elastic at the price $P = w_A + w_B$. The industry will supply whatever quantity Q is demanded at that price. The supply curve is a flat, horizontal line.

Figure 1
World Supply of Textiles
(No-Slavery World)



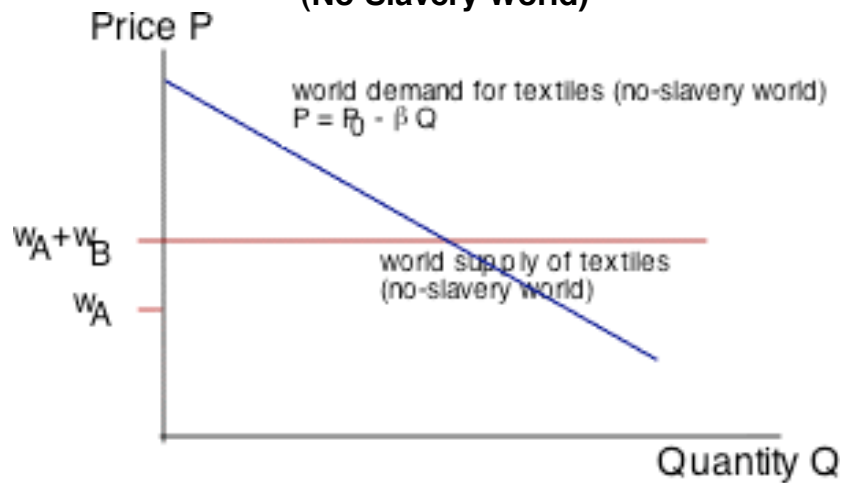
In a world without slavery and with constant returns to scale in growing and processing cotton, the world supply of cotton textiles is a perfectly elastic horizontal line, with the price of cotton textiles equal to the sum of the American cotton-growing wage w_A and the British cotton-processing wage w_B .

Let's also assume a particularly simple form for world demand for machine-made cotton textiles. Let the demand curve be:

$$P = P_0 - \beta Q$$

If production of machine-made cotton textiles were very small, then the (few) purchasers would be willing to pay some maximum price P_0 : that's the value of machine-made cotton textiles to those who want them the most. As production expands, in order to sell all the textiles produced they need to be sold to those who value them less and less, with each unit increase in quantity produced reducing the market price by the demand parameter β .

Figure 2
World Demand and Supply of Textiles
(No-Slavery World)



The equilibrium quantity—the amount of machine-made cotton textiles produced—will be that which makes the price along the demand curve equal to the supply price:

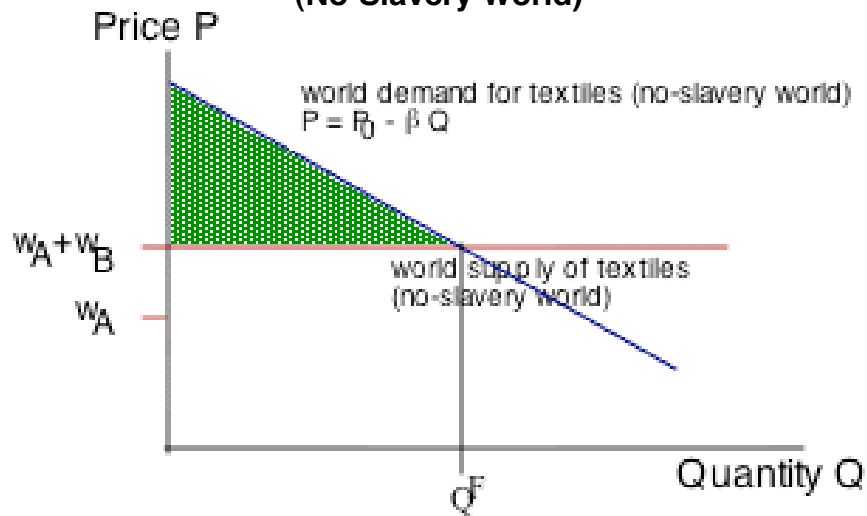
$$P_0 - \beta Q = P = w_A + w_B$$

And so the quantity Q_F of cotton textiles produced in the no-slavery world in which cotton is grown by free labor is:

$$Q_F = (P_0 - w_A - w_B)/\beta$$

Now let's calculate who gets the surplus from the cotton-growing and cotton-textile industry in this no-slavery world. American cotton growers earn the wage w_A —but they could earn that same wage working in New York or growing wheat in the Midwest: they aren't made better off by the fact that the cotton-textile exists. (This is surely too strong a conclusion: their wage w_A is probably a small premium above the wage they would earn elsewhere. But the major point is that they gain little, and that is surely true.) British cotton processors earn the wage w_B —but they could earn the same wage elsewhere: the British economy is full of opportunities and has a very flexible labor market. (Once again, the conclusion is too strong, but the message—that British workers had ample other opportunities and would have done almost as well without the option of working in spinning mills—is almost surely true.)

Figure 3
Consumer Surplus in Textiles
(No-Slavery World)



Now let's look at consumers of cotton textiles. They get lots of surplus. The first consumer gets $(P_0 - w_A - w_B)$ in surplus. The last purchaser gets 0. The average purchaser gets $(P_0 - w_A - w_B)/2$. There are $(P_0 - w_A - w_B)/\beta$ purchasers. So total consumer surplus is:

$$\frac{(P_0 - w_A - w_B)^2}{2\beta}$$

Which you can also think of as the shaded green area in Figure 3 above.

Now let's switch gears, and look at the world as it actually was—the world with American slavery.

The World as It Was, with Slavery

Now consider the world as it was, with slavery. North American slaves—and there were, with the closing of the slave trade, a

relatively fixed number of North American slaves—could grow enough cotton to produce a quantity Q_S of textiles. Assume that all the slaves who could be deployed to cotton were, and that the total production of cotton textiles with slavery was Q_S . Then the price of cotton textiles will be the most that that quantity can be sold for:

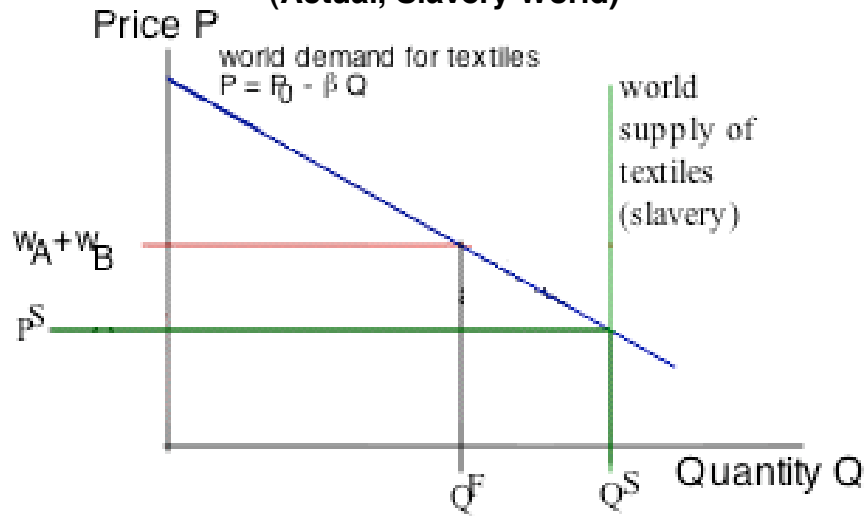
$$P_S = P_0 - \beta Q_S$$

That's the price at which British textile manufacturers will sell their textiles. Because they are a competitive industry on the buying side as well as the selling side, and because the quantity of cotton that slaves can grow is fixed and limited, they will pay as much as they can for scarce cotton imports. How much can they afford to pay? Well, if they pay more than $P_S - w_B$ they will lose money and go bankrupt. So slaveholders will earn

$$P_S - w_B$$

For each unit of cotton they sell.

Figure 4
World Demand and Supply of Textiles
(Actual, Slavery World)



How is this $P_S - w_B$ per unit of cotton divided up? Some—an amount w_S —goes to maintain the slaves. Some—an amount t —is collected as tariffs on imports of goods from Britain that slaveholders buy and goes to reduce the taxes of the United States’s northern and western free-state citizens. And the rest:

$$P_S - w_B - w_S - t$$

goes as profits to the slaveholders.

Or does it? The supply of slaves is fixed. Slaves are a durable asset. If you get $(P_S - w_B - w_S - t)$ for each bale of cotton you extract from a slave, people who want those profits will bid up the price of slaves. How far will they bid them up? Until the price of slaves is such that it is no longer an extraordinarily good deal to buy slaves and put them to work in the cotton fields. If r is the

appropriate rate of return on capital in the American economy, the price of slaves will rise to:

$$(P_S - w_B - w_S - t)/r$$

The capitalized value of the profits from slaveholding is thus captured by those who owned slaves when slave prices rose, and slave prices rose when people learned more about just how much surplus there was from growing cotton and shipping it to Industrial Revolution Britain. It was those who held slaves then who benefited the most, not those who bought slaves at high prices and put them to work later on.

Of course, the process of realizing exactly what a big deal the cotton gin was and exactly how strong was factory demand for ginned cotton wool was a gradual process. It did not happen all at once, at one moment. There was a time when prices of slaves were rising, as more and more people realized what the future was going to bring. All those who owned slaves during this period profited mightily.

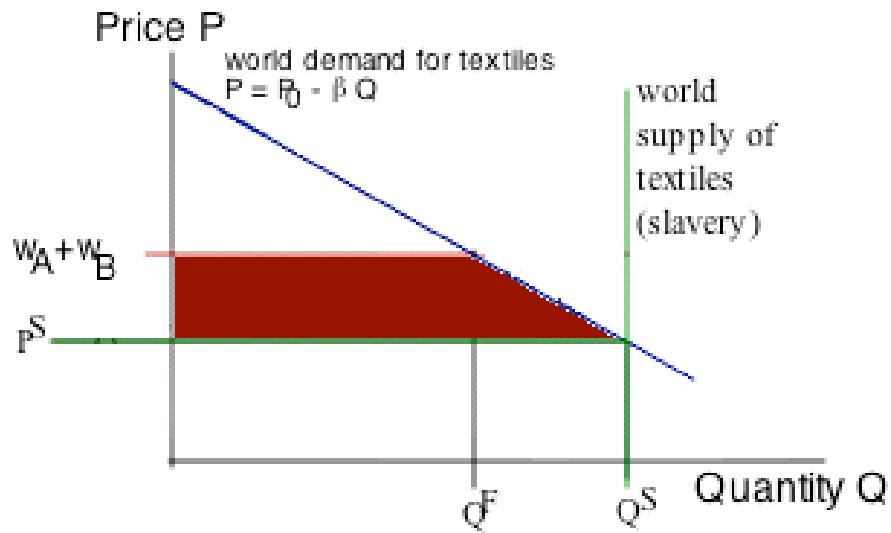
So northern and western taxpayers gained as tariffs on imports sold to slaveholders reduced their taxes. Those who owned slaves when it became clear that Cotton would be King gained. How about consumers—the buyers of cotton textiles?

Well, as long as P_S is lower than $w_A + w_B$ (and we know it isn't: if it were growing cotton with free labor would have been cheaper than growing cotton with slave labor), consumers gain because the consumer surplus triangle for the actual, slavery world is bigger than the consumer surplus triangle for the counterfactual, no slavery world. The difference is:

$$(w_A + w_B - P_S)(Q_F + Q_S)/2$$

and can be seen to be the shaded area in Figure 5.

Figure 5
Gain to Consumers From Slavery



Now, as I said above, all these conclusions are too strong. British wages were not completely unaffected by the existence of the cotton textile industry. British manufacturers gained, the landlords of Manchester gained, and British workers pulled into the booming textile factories gained too. But the British textile-processing industry (and the American cotton-growing industry) were nearly competitive. And competitive industries do not capture economic surplus—they pass it along, forward to consumers and backward to the owners (in this case, initial slaveholders) of the factors of production they must be.

So economists would say that the standard answer—that slaveholders benefited from cotton-growing slavery—is largely

wrong. Initial slaveholders when it became clear how big a deal cotton would be gained, but world consumers gained as well, and so did those who benefited from lower American domestic taxes made possible by high tariffs on imports financed by cotton exports.

This is why we economists want to make every sociologist, historian, and political science at Berkeley — and beyond! — to take microeconomics, and then to take it again, and again. If you are going to evaluate what's going on in the economy, you need to be able to make these “incidence” calculations. And only microeconomic theory gives you the tools you need to do so.

You may complain: I've thrown a lot of algebra around (simple algebra) but no real numbers. How important was all this, really? Ah. You're going to have to answer that. That's what the next problem set is about...

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