Slavery and Northern Industrialization

By Sven Beckert and Mark Stelzner[1]

Abstract: From the 1820s through the 1850s, parts of New England began industrializing. Over the same period, slavery expanded in the southern states in terms of the number enslaved, the geography it encompassed, and the amount each enslaved worker produced. While many scholars have looked at the connections between northern industrialization and southern slavery, it is our aim in this paper to better identify the links between these two crucial developments in our nation's history by estimating the importance of the southern market for northern textiles—the key manufacturing industry during the early antebellum period. As we will see, the South was a crucial market for cotton textiles produced in America's first factories.

Keywords: slavery, capitalism, industrial revolution, antebellum America

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[1] Sven Beckert: Harvard University, Department of History. Email: beckert@fas.harvard.edu. Mark Stelzner: Connecticut College, Department of Economics. Email: mark.stelzner@conncoll.edu.

In the 1820s, the United States began industrializing, and by the 1850s, some of its modern industries—like cotton textile manufacturing—had shifted from almost exclusively producing for domestic consumption to competing in international markets. Over the same period, slavery expanded in the southern states in terms of the number enslaved, the geography encompassed, and the amount produced per enslaved worker.[2]

The connection between these two developments, if any, was a contentious issue for contemporaries as well as scholars today, and accepted opinion has changed over time. For many antebellum contemporaries, the North's economic links to the South were clear: southern cotton fed northern textile mills: northern merchants profited from slavery-related activities; and the South served as an important market for the emerging northern industry. The conclusions that contemporaries drew from these links, however, differed. Some argued that these links made the North complicit in the enslavement and exploitation taking place in the southern states. Wendell Phillips, a northern abolitionist, concluded that southern products needed to be boycotted, although the desire to disentangle oneself and the northern from slavery for moral reasons was a minority position.[3] For many other Americans, the economic links between the North and the South were something to recognize pragmatically when thinking about national political choices that might antagonize the South and upset these lucrative economic connections. In 1860, Thomas Kettell beseeched northerners to change their stance toward the South to preserve their "rich future" which derived from "a monopoly of navigating, importing, and manufacturing for the South."[4]

Some in the South were also concerned: they believed that these economic connections would leave the slave states vulnerable if conflict between the two sections of the country became heated. In the early 1850s, the *Lynchburg Virginian* explained to its readers that "it must occur to the South that if our relations with the North should ever be severed—and how soon they may be, none can know (may God avert it long!)—we would, in all the South, not be able to clothe ourselves." As a result, the paper editorialized, the South should develop its own manufacturing base to protect slavery.[5]

[2] Tadman (1989) and Stelzner and Beckert (2024).
[3] Du Bois (1935, p. 25).
[4] Kettle (1860, pp. 5 & 19).
[5] Quoted in Olmsted (1862, p. 587).

From the end of nineteenth century through the mid-twentieth century, many scholars and political commentators argued similarly that cotton and southern exports, and with it slavery (the source of the majority of these exports throughout much of the antebellum period) was important to early economic development in the United States.[6] W.E.B. Du Bios summarily stated, for instance, that "Black labor became the foundation stone not only of the Southern social structure, but of Northern manufacture and commerce."[7] Douglass North similarly contended that the expansion of cotton growing in the South was the source of economic growth, as it stimulated other sectors of the economy and drove early northern industrialization.[8]

Yet from the mid-twentieth century on, an increasing number of economists began pushing back against the idea that slavery and American economic development were connected. Fishlow showed that most of the goods shipped down the Mississippi River to New Orleans were re-exported to the North or abroad and thus argued that from 1839 on, the South was not a major market for Western foodstuffs. Gallman demonstrated that southern farms in 1860 were largely food sufficient—underscoring that they had little need to import food from the West. Consequently, the argument went, southern demand was not a central factor in developing commercial agriculture in the western United States in the later antebellum years.[9]

By constructing estimates of the magnitude of the North-South coastwise trade in 1824, 1831, and 1839, Herbst similarly argued that southern demand was not a central factor driving northern industrial growth. As an upper bound estimate, he found that the total value of the North-South trade in 1839, for instance, was $56.9 million—which, after deducting foreign imports being reshipped coastwise from the North to the South, represented only 16.4 percent of northern manufacturing output. Because not all the cargo shipped coastwise was manufactured goods, the southern market for northern manufacturing was likely much smaller.[10] Based on these findings, Herbst unequivocally concluded that the southern-demand-led development theory was "disproven."[11]

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[6] Kettell (1860), Callender (1902), Du Bois (1935), Williams (1944), and North (1961).
[7] Du Bois (1935, p. 5).
[8] North (1961, pp. 67 – 73).
[9] Fishlow (1964, 1965) and Gallman (1970).
[10] Also, he maintained that the quantity of foreign imports shipped coastwise was also likely larger than he assumed in the baseline estimate summarized above.
[11] Herbst (1975, 1978; p. 61). To be sure, Herbst (1975) offered an estimate for the importance of cotton exports in creating demand for northern manufacturing goods: his estimate is significantly smaller than that reported

Yet the question has not gone away. Since the turn of the twenty-first century, an increasing number of social scientists has reasserted the connection between the expansion of slavery and early northern industrialization in the United States and abroad.[12] Seth Rockman, for instance, has argued that "the manufacturing of plantation goods allowed Northern communities to offshore their slaveholding—to reap the economic benefits of slavery at a safe distance from the buying, selling, beating, and abusing of enslaved people."[13] Scholars like Rockman insist that uncovering the links between the development of industry and the expansion and intensification of slavery is important for understanding both our economic history and the inequities of our society today.

In response, many economists have complained that current assertions about the connections between slavery and industrialization have not engaged past economic scholarship and have pointed to the work from the mid- to late-twentieth century highlighted above to contest these claims.[14] Heated discussions, some quite public, have emerged around this topic, not least because the issue at stake has significant implications for the politics of our own times.

Given the importance of the topic for understanding the economic development of the United States and capitalism more generally, as well as its relevance to our thinking about current inequalities, in this paper we re-examine the relationship between northern industrialization and southern slavery by analyzing the growth of cotton textile manufacturing in New England—the central industry in the early antebellum period—and its connections with the South. As we will see, southern demand was a key factor in stimulating the growth of cotton textile manufacturing.

The North-South coastwise trade: Herbst's estimates

Before we look at the cotton textile industry specifically, we need to scrutinize in more depth the literature on the overall magnitude of the North-South trade. Let us return first to some of the early claims that northern industrialization was unrelated to the southern slave economy.

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above, between 2.0 and 4.0 percent of northern manufacturing output. However, it is not based on the same data used to calculate the total magnitude of the North-South trade. Herbst arrived at this lower figure by multiplying the value of cotton exports in 1839 by an assumed marginal propensity to consume manufactured goods.

[12] Beckert (2014), Beckert & Rockman (2016), Darity & Mullen (2020), Stelzner and Beckert (2024), and Rockman (2024).

[13] Rockman (2024, p. 4).

[14] Hilt (2017), Olmstead & Rhode (2018), and Burnard & Riello (2020).

In 1975, Herbst calculated the flow of different types of ships moving from northern to southern ports—the main form of trade between the two regions during the antebellum period. Because both his sources are incomplete, he sampled from each to estimate the overall population of ships moving south in the coastwise trade.[15] Herbst also estimated the average value of cargo on ships of different sizes. He then combined the flows with the average value of cargo per ship to calculate the magnitude of North-South interregional trade in 1824, 1831, and 1839.

His two sources for the flow of ships are ship manifests and lists of ships making the journey south reported in *the New York Shipping and Commercial Lists*, a business newspaper, and his source for the average value of cargo per ship is ship manifests. The ship manifests ostensibly represent complete lists of the cargo onboard ships engaged in coastwise trade and were filed by the master of the ship with the collections officer at the port of disembarkment as required by federal law.[16]

At first glance, Herbst's sources and methods appear strong. However, closer inspection reveals significant holes in the data he used, and these holes required him to make large assumptions—assumptions that were both obscured in his presentation and turn out to be problematic.

One major issue is that the cargo manifest often failed to completely specify the goods being transported. Sometimes masters of ships just listed cargo as "merchandise"—leaving it unclear whether this referred to soap, shawls, apparel, or something else.[17] If one is calculating the average value of cargo transported on a ship, one must give unspecified goods prices, even though it is not clear what exactly the goods are. Obviously, prices for different goods vary widely. For example, a box of soap had an average price of $1.51 in 1839; a box of shawls had a price of $13.50, and a box of apparel cost $166.17.[18] Clearly, any assumptions made about the price of unspecified boxes of goods—and what these boxes contained—would significantly affect the estimated average value of cargo and, especially if the number of unspecified goods was large, the overall magnitude of North-South trade.

[15] Herbst (1975) uses the capture-recapture method, a statistical technique usually used to measure wildlife populations, to create estimates of the overall flow of ships moving south in the coastwise trade.
[16] Johnson et al. (1915).
[17] Some of the items on the manifests are also unreadable at present.
[18] See price lists compiled by Herbst (1974) in Appendix 1 Table 3 pages 635 through 703.

In Herbst's initial publication on the topic, he did not mention the problematic nature of the data. Three years later, in another—much less noted—publication, he noted that many of the goods listed on ship manifests did not specify what type of good they were. Furthermore, some of the goods listed were unreadable. These unspecified or unreadable entries seems to have been overwhelmingly present on ships departing from New York City—the largest port in the United States during the later antebellum years.[19]

To address these issues, Herbst estimated the value of unspecified commodities onboard the ships he sampled by using the average of all specified commodities listed on the ship. However, using a different assumption to estimate the value of unspecified goods would significantly change his overall estimates. For example, in his later publication, Herbst created a "Variant II" where the value of unspecified "merchandise" is given a price of 50 percent more than the average of other goods listed as cargo. This alternative assumption for pricing unspecified goods led to an estimate of $74.5 million for the total value of North–South trade in 1839, an estimate that was 31 percent higher than that reported in his earlier publication.[20]

As we saw from our brief survey of the prices of soap, shawls, and apparel—goods commonly shipped coastwise during this period—a fifty percent increase in the estimated price of an unspecified good could easily represent a small change relative to the potential range of prices of goods onboard ships engaged in the coastwise trade.[21]

Additionally, in estimating the cargo aboard ships of different size, on different routes, and traveling during different parts of the year, Herbst samples at most two ship manifests to calculate averages. Sometimes, if manifests for two ships were not available, he only sampled one ship, and there were cases where no manifests were available to sample for a given port of departure, time of year, and size of ship.[22] In those cases he used averages for other ports, times, and size categories.[23]

Clearly, only using one or two ships to calculate the average value of cargo carried per ship of a flow of vessels that is much larger than two can lead to values that do not represent the mean of the overall population of ships engaged in the coastwise trade. The average value of

[19] Herbst (1974; p. 33).
[20] This estimate includes foreign imports reexported to the South via the coastwise trade. Herbst (1978; p. 65).
[21] For example, the price of a box of shawls was 894 percent higher than a box of soap in 1839, and the price of a box of apparel was 1,230 percent higher than a box of shawls.
[22] For time categories, Herbst (1974) created two groups: January through June and July through December.
[23] Herbst (1974, p. 31).

cargo on different types of ships could potentially be significantly different from the value Herbst estimated based on his two chosen ships.[24] As with his valuation of unspecified goods in cargo manifests, this strategy for creating averages was not clarified in the initial publication that did so much to move conventional thought in economics to the conviction that southern demand was not important to northern industrialization.

All of this is not to say that Herbst's valuable work of going through the many ship manifests and *New York Shipping and Commercial Lists* was in vain. Most, if not all methods, even if they are more direct, require assumptions. Often these assumptions can significantly change the calculations they are so central in creating. However, Herbst's underlying assumptions reveal that his work does not necessarily refute the possibility that the South represented a much larger source of demand for northern manufactured goods and that southern demand could have been key for northern industrialization.

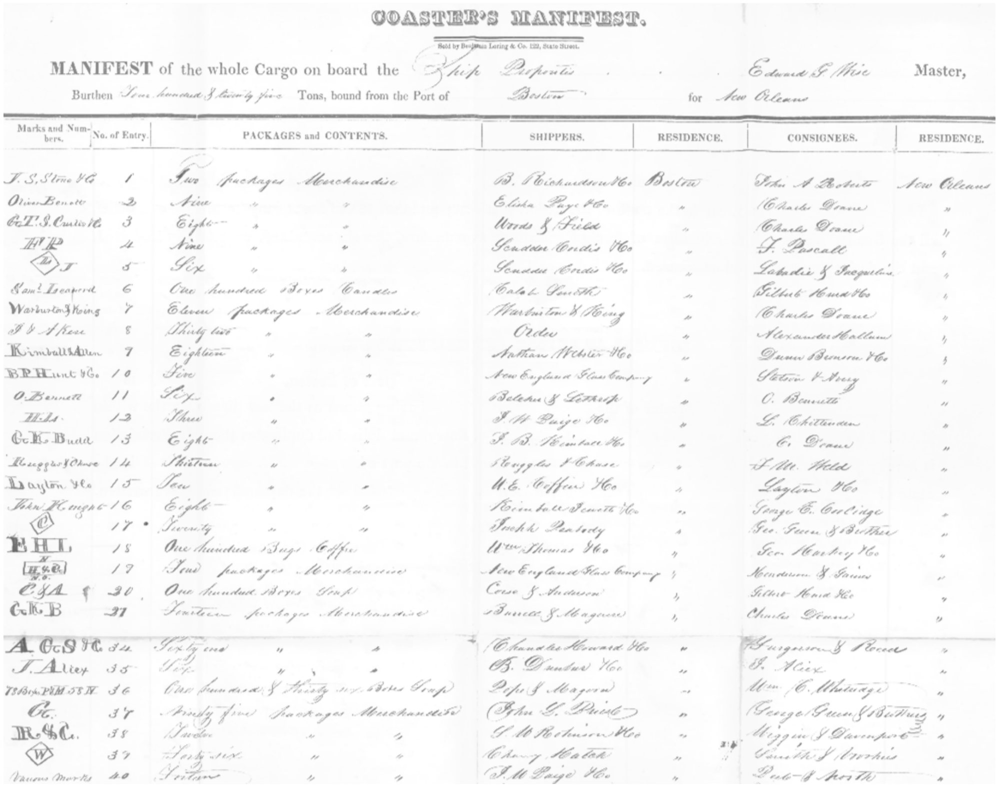
A reexamination of ship manifests

To better understand trade between North and South, we coded the manifests for the 85 ships involved in the coastwise trade that arrived at the port of New Orleans between August 1st and October 17th in 1840. In Figure 1, we display a copy of part of the manifest for a ship that traveled from Boston to New Orleans during this period. These manifests were lists of the goods onboard, and full manifests from larger ships from Boston and especially New York are many pages long with hundreds of entries. In total, the manifests for these 85 ships had 3,637 entries, representing large quantities of oil, butter, beer, liquor, cheese, hats, rope, shoes, shovels, textiles, and chains, among other goods.

As highlighted in the previous section, the vast majority of the items listed on ship manifests were either not specified or recorded as "merchandise." This was also the case for the ship manifests we coded, as can be seen in the manifest depicted in Figure 1 where 36 of the 40 visible entries were recorded as "merchandise." Across the 85 manifests we coded, 70.64 percent of 3,637 entries were either unspecified or listed as "merchandise." This means, as highlighted in the previous section, that assuming a low price for the unnamed goods creates a situation where the assumption becomes the conclusion.

[24] Indeed, as noted by Herbst (1974; p. 1004, Table 22) the standard deviations of the average cargo carried per ship for his samples was very high.

Figure 1: Ship Manifest from Coastwise Trade


COASTER'S MANIFEST.

MANIFEST of the whole Cargo on board the Ship ... Master,

Burthen ... Tons, bound from the Port of Boston for New Orleans

Marks and Numbers.	No. of Entry.	PACKAGES and CONTENTS.	SHIPPERS.	RESIDENCE.	CONSIGNEES.	RESIDENCE.

Source: RG 36, Records of the Bureau of Customs, Inward Coastwise Manifests, August 1st – October 17th, 1840, Box 142, NC – 154, Entry 1631, National Archives.

A key to better understanding the scale and shape of the coastwise trade is understanding what goods are subsumed under the heading "merchandise." This is not easy. Merchandise seems to have been a general term that was used to refer to any type of good. For example, the law of the United States governing the importation and exportation of goods often contained the standard phrase "any goods, wares, or merchandise" when specifying which products required the payment of a tariff or had to be reported to custom officials. Additionally, the Treasury reports on trade statistics, which were reprinted throughout the antebellum press, often used the term merchandise to refer to all goods.[25]

[25] For example, see *New York Tribune*, Fri., Jan. 21, 1853, p.4: "The export of domestic merchandise has fallen off nearly twenty-four million and a half." Indeed, from 1851 to 1852, total exports fell by 24 million (Series U61 - 72 in historical statistics).

At the same time, non-government officials seemed to use the term "merchandise" to refer to specific types of goods—manufactured products. In 1855, the *St Louis Republic* reported that a boat arrived "from New Orleans and brings a fair cargo of sugar, molasses, coffee, and other groceries and merchandise."[26] Likewise, in 1858 after listing all the coal, iron, salt, wheat, and corn passing through the custom house, the *Buffalo Courier* stated that "Merchandise, manufactures, &c., we omit altogether, as we have been unable to form anything like a correct estimate of the quantity of that sent west, as no record whatever is kept of it."[27] Additionally, some scholars have noted that textiles were often called "merchandise" in cargo manifests.[28]

The reason for leaving goods unspecified seems to have been merchants' desire to control information on supply and thus push up the prices of the goods they were selling. In discussing the arrival of a ship whose manifest was almost completely unspecified, for example, the *Sacramento Bee* explained that "it is an old trick of importers to import large quantities of goods as unspecified merchandise, in order that people may not find out the real quantity on the way."[29] An article in the *San Francisco Shipping Lists* explained that at "some particular stage of our market, an article in general use becomes scarce…the smart merchants at the East very often sending [sic] large lots on their own accounts, to overreach their correspondents here" and directs their goods to be listed as "merchandise" on ship manifests to suppress information about the large in-bound supply.[30]

Consequently, the term merchandise seems to be time and place specific—used on certain routes and parts of the year when specific goods were in heavy demand and merchants tried to control their price. As a result, individuals in ports across the county, especially those farther from New York, would often speculate about what was coming to their ports. The *New York Times* republished a column on trade in San Francisco stating the following: "The fact of large parcels of Dry Goods [which includes textiles] being known to be on the way, and still

[26] *St Louis Republic*, Tuesday, Feb. 13, 1855, p. 3.
[27] *Buffalo Courier*, Sat, Jan. 23, 1858, p.2
[28] For example, Albion (1939, p. 59) states, "incoming textile cargoes were designated merely by the vague phrase 'merchandize'[sic]." However, on page 117, Albion also states that 'merchandise' was a "blanket phrase."
[29] *Sacramento Bee*, Sat, April 17, 1858, p.3. Also see *Nevada Democrat*, Wed, March 17, 1858, p.2: "Our readers will remember that when eastern shippers wish to suppress the name of the merchandise shipped by them, they enter it on the manifest simple as 'mdse.'
[30] This article was reprinted in *Colonial Times*, Sat. April 23, 1853, p.3.

larger lots conjectured, (it being the custom of some of our principal importers to manifest their goods simply as merchandise.) has also tended to depress the market."[31]

This same dynamic plays out in manifests for ships disembarking in New Orleans. The percentage of goods not specified or listed as "merchandise" varied significantly between ships from different ports of origin. In Table 1, we display data on the number of ships arriving, total tonnage, number of entries, and the percent of goods unspecified by port of origin. As we show in the final column in Table 1, ships originating from the three main northern ports—New York, Boston, and Philadelphia—had a much higher percent of goods that were unspecified or listed as "merchandise" than ships originating from smaller northern ports and all southern ports. The goods commonly shipped between smaller northern ports or any southern port and New Orleans were less likely to be manufactured goods and were almost never textiles, indirectly supporting our contention that the "merchandise" label was often used for textiles and other manufactured goods. For example, only hay, lime, potatoes, and soap were shipped between Portsmouth, Portland, or Camden and New Orleans during the period in question; all entries were specified, and none were listed as merchandise.

Similarly, only 14.63 percent of goods shipped between Charleston, Savannah, Baltimore, Mobile, or Pensacola and New Orleans were unspecified or listed as "merchandise." Of the specified goods from these ports, very few textiles were shipped—only three bales and one package of cotton bagging and one bale of course textiles.

We would not expect smaller northern ports or any southern port to ship significant amounts of manufactured goods generally or textiles more specifically since the production of manufactured goods was predominately located in the North. Textile production was centered in Massachusetts and Rhode Island, making Boston a likely central point of embarkment for the North-South textile trade. At the same time, New York was the most important port in the county, drawing much of the trade from all over the county. For example, a sizable quantity of cotton was first shipped coastwise from the South to New York and then exported across the Atlantic. Similarly, the centrality of the port of New York would have made it the central shipping point for northern textiles, even those produced in New England.

[31] The *New York Times*, Tue., Nov. 29, 1853, p. 1.

Table 1: Details on Coastwise Ships Arriving in New Orleans

City	*Number of Ships Arriving in New Orleans from Different Ports*	*Total Tonnage of All Ships from Same Origin (Tons)*	*Number of Entries of All Ships from Same Origin*	*Percent of Goods Unspecified or Listed as Merchandise from Same Origin (%)*
New York	24	8,482	2,611	74.22
Boston	24	6,790	659	69.19
Philadelphia	9	2,192	238	65.97
Charleston	3	372	19	26.32
Savannah	1	90	5	20.00
Baltimore	3	606	81	14.81
Portsmouth	2	714	2	0
Portland	1	469	4	0
Mobile	7	369	8	0
Pensacola	8	393	8	0
Camden	2	503	2	0

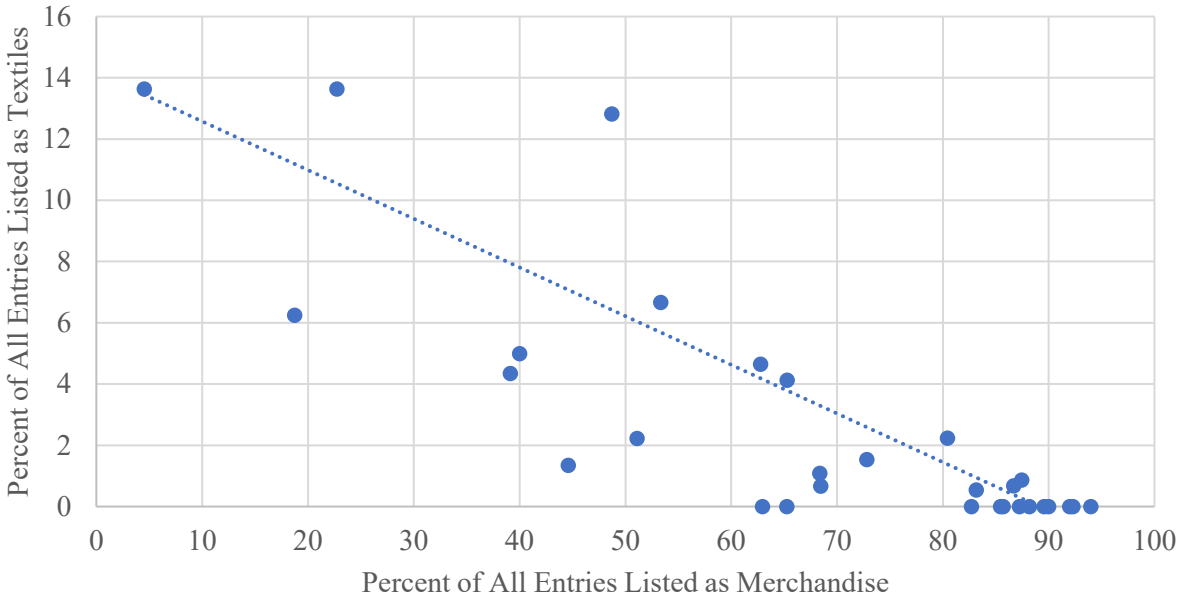
Source: Authors' analysis of ships engaged in the coastwise trade arriving in New Orleans between August 1st and October 17th, 1840. Box 142, NC – 154, Entry 1631, National Archives.

Thus on ships from New York and Boston, where we would expect more manufactured goods generally and textiles specifically, more goods are listed as "merchandise." Additionally, on ships carrying more than three different goods from Boston and New York, when more of the goods were specified clearly, textiles were a larger percent of all entries. In Figure 2, we display data on the relationship between the percent of all entries left unspecified or listed as "merchandise" and the percent of entries that were textiles for ships traveling from New York or Boston to New Orleans. For textiles, we include goods described as "domestics", "cloths", "cottons", "clothing", "carpeting", "blankets", "flannels", and "cotton bagging." Each dot in Figure two represents a ship from New York or Boston that arrived in New Orleans between August 1st and October 17th of 1840.

As we can see, when the vast majority of goods were unspecified or listed as "merchandise," a very small percentage or none of the specified entries were textiles. However, on manifests with more detail, the percent of entries that were textiles increased significantly. But this relationship between clearer specification of entries on manifests and textiles did not exist for ships originating from Philadelphia, any minor northern port, or any major or minor

southern port—highlighting the likelihoods that a significant portion of the goods specified as "merchandise" in manifests from ships originating in New York and Boston that did not give much detail about their cargo were textiles.

Figure 2: The Relationship between Unspecified Goods and Textiles



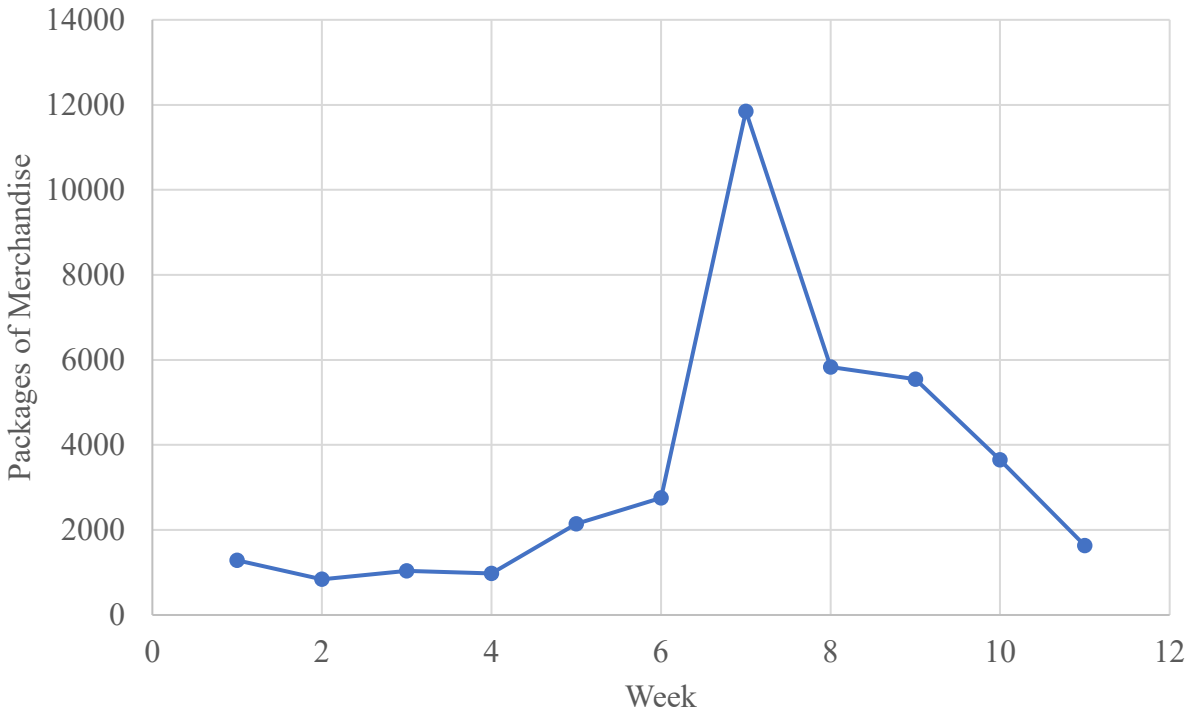
Source: Authors' analysis of ships from New York and Boston engaged in the coastwise trade arriving in New Orleans between August 1st and October 17th, 1840. Box 142, NC – 154, Entry 1631, National Archives.

There is one more piece of evidence that suggests that "merchandise" was often used to describe manufactures generally and textiles specifically. Twice a year, southern planters bought provisions to clothe their enslaved workers and provision their plantation—once in September and once in March.[32] We would expect this pattern for purchasing goods to be apparent in ship manifests engaged in the coastwise trade, and in fact, this was exactly when shipments of "merchandise" from Boston and New York peaked. In Figure 3, we display the total number of packages of "merchandise" arriving by week to New Orleans. Week one is August 1st through 7th; week two is August 8th through 14th, and so on. We display packages of "merchandise"

[32] Rockman (2024).

because packages (instead of boxes, barrels, kegs, trunks, or bales) were by far the most common form of shipment for goods labeled "merchandise" in ship manifests.

Figure 3: The Number of Packages of "Merchandise" Arriving in New Orleans



Source: Authors' analysis of ships engaged in the coastwise trade arriving in New Orleans between August 1st and October 17th, 1840. Box 142, NC – 154, Entry 1631, National Archives.

As we can see from Figure 3, the number of packages that were unspecified or listed as "merchandise" were around 1,000 for the four weeks of August, 1840. In the first week of September, they increased to 2,000 and in the second week to 3,000 packages. Between September 12th and 18th, the number of packages of "merchandise" arriving at the port of New Orleans skyrocketed to almost 12,000—a twelve-fold increase over the average throughout the previous month. Then in the final week of September and into October, the number of packages of "merchandise" fall off sharply. The time trajectory of the arrival of "merchandise" in New Orleans thus also indicates that a good portion of this merchandise was textiles and other manufactured goods necessary to supply the plantation for the next six months.

In sum, ship manifests on their own are not a conclusive way to determine what was being traded between the North and the South during the antebellum period. At the same time, the port of origin, differentiation between highly specified and unspecified manifests, and timing of shipment of "merchandise" points to it being often but not always textiles.

The North-South coastwise trade: import capacity

To get a better idea of how much and what was being shipped coastwise between the North and the South during the antebellum period, we can utilize two other types of data: import capacity and production and demand surpluses and deficits. As mentioned above, Fishlow played a key role in showing that southern demand for western goods was much smaller than previously assumed. In the same paper, he also calculated southern demand for northern goods, arriving at a figure for the North-South trade significantly larger than Herbst's: Fishlow estimated that the South consumed around $85.6 million worth of northern goods in 1839. After deducting foreign imports that arrived at northern ports and were then shipped south, Fishlow's estimate for the magnitude of the North-South trade signified that as much as 26.6 percent of total Northern manufacturing output was consumed in the South in 1839.[33] Fishlow's conclusion is quite different from Herbst's—vindicating development theories that highlight the importance of the domestic market.[34]

While Fishlow's estimates have been pushed aside by many scholars in economics, analyzing the problematic methods and assumptions utilized by Herbst suggests that his estimates might be more a function of his assumptions than a reflection of trade flows themselves. Herbst's estimates of the magnitude of the North-South coastwise trade could easily be in-line with those from calculating the import capacity—the method Fishlow utilized. Import capacity thus remains a viable method to estimate the size of the southern market for northern goods. At the same time, this method allows for estimation of southern demand as far back as 1810; Fishlow, however, estimates southern demand for northern goods starting in 1839—long after some of the key industries in the North had begun to emerge.

[33] As with Herbst's upper bound estimate, this assumes that everything sent south was manufactured goods and subtracts an assumed $11 million worth of foreign imports that arrived in the South via the coastwise trade.
[34] Fishlow (1964, p. 363).

Consequently, in this section, we extend Fishlow's methods back in time and replicate calculations for years during his period of analysis, 1840 through 1860, to look at how southern demand for northern goods changed throughout the antebellum period. We also contextualize these changes in the economic history of antebellum tariff laws, which shows that the expansion of southern import capacity and the channeling of this demand to the North through tariff and good fortune from the dramatic decrease in the cost of producing cotton textiles lines up perfectly with the early expansion of textile production in the Northeast.

After the ascendency of cotton in the early 1800s, the southern economy produced a large portion of the goods exported from the United States. Between 1803 and 1810, cotton exports represent 24.4 percent of all exports from the United States. Over the next three decades, the importance of cotton exports increased rapidly, reaching 58 percent of all exports between 1831 and 1840, and in the two decades before the Civil War, cotton exports remained central, representing around half of all U.S. exports by value.[35] The South also exported abroad (and to other parts of the United States), significant quantities of tobacco, sugar and cane products, and goods like rice, naval stores, and wheat. The returns on these exports gave the South the equivalent capacity to import—i.e., their import capacity.

In Table 1, we estimate the South's total import capacity. Columns two through nine summarize the total value produced of key southern staples—including cotton, tobacco, sugar and cane products, naval stores, wheat, and indigo—in ten-year intervals from 1810 through 1860.[36] In the next four columns of Table 1, we list information on goods coming in and out of the port of New Orleans. New Orleans connected the South to the West via the Mississippi River, and earlier in the antebellum period (prior to the canal and railroad booms), most western goods traveled down the Mississippi River through the port of New Orleans to northern and foreign markets. Thus the residual from the receipts from the interior at New Orleans minus foreign exports and goods shipped coastwise from New Orleans is the dollar value of western goods consumed in the South—a part of the South's import capacity being spent on goods coming down the Mississippi River.

[35] Lipsey (1994; pp. 22 – 31).
[36] Naval stores refer to tar, pitch, resin, and turpentine, used during the period for ship production and maintenance.

The penultimate column in Table 2 is the dollar value of foreign imports arriving directly to southern ports—representing another part of the South's import capacity being spent, in this case, on goods from abroad. To be sure, these were not the only foreign imports consumed in the South. As the antebellum period progressed, more and more foreign imports were first shipped to New York or some other northern port, then re-shipped coastwise to the South.[37]

The final column in Table 2 is the total import capacity of the South minus western imports consumed in the South and foreign imports arriving directly to southern ports. Since we have considered all other potential sources of importation, this figure is a rough estimate of the amount of current dollars the South had left to spend on the remaining importer, the North, which includes foreign imports that entered the United States through a northern port and were then shipped coastwise.

As we can see from Table 2, southern import capacity for northern goods increased from $2.5 million in 1810 to $26.2 million in 1820—a more than tenfold growth over the decade. Given the dramatic trade disruptions caused by the War of 1812, this increase took place after the war ended in 1815. Between 1820 and 1830, southern import capacity for northern goods increased by another 56 percent. From Table 2, we can see that this growth in the ability to import goods from the North stemmed from both an increase in the value of staple crops produced in the South and a reduction in western and foreign imports arriving directly to southern ports.

[37] Albion (1939).

Table 2: Import Capacity of the South 1810 – 1860

	Southern Production (millions of current dollars)								*Western imports (millions of current dollars)*				*Foreign Imports arriving directly to southern ports*	*Remaining import capacity of South (millions of current dollars)*
	Cotton	**Tobacco**	**Rice**	**Naval Stores**	**Sugar & cane products**	**Hemp**	**Other (wheat, etc.)**	**Total**	**Receipts from interior at New Orleans**	**Foreign exports at New Orleans**	**Coastwise exports at New Orleans**	**Consumed in South**		
1810	12.5	6	1.9	0.2	0	0.4	0	21.0	7	1.8	1.8	3.4	15.1	2.5
1820	23.7	8.3	1.3	0.6	5.1	0.5	0	39.5	12.6	7.2	5.2	0.2	13.1	26.2
1830	33.7	6.9	1.3	1.1	8.5	2	0	53.5	22.1	13	8.4	0.7	12.0	40.8
1840	62.1	15.3	1.6	1.5	7.6	4.2	3.4	95.7	49.8	33	22	-5.2	16.0	84.9
1850	118.3	19.6	2.7	2.9	21.8	3.5	3.8	172.6	96.9	37.7	27.8	31.4	17.0	124.2
1860	217.3	37.3	3.2	11.8	38.6	5	4.1	317.3	185.2	107.6	40.1	37.5	33.0	246.8

Source: Data on the total amount of cotton, tobacco, rice, sugar and cane products, and hemp produced in the South come from Towne and Rasmussen (1960). Data on naval stores come from Perry (1968, p. 515, 524 fn 55) for1840 and 1860, Schorger and Betts (1915) for 1810 and 1840, and are extrapolated for 1820 and 1830.[38] Data on wheat produced in the South comes from Rhode (2024) and Wright (2006). Receipts from interior at New Orleans, foreign exports at New Orleans, and coastwise exports at New Orleans come from the Report of the Internal Commerce of the United States for 1888 (pp. 185, 199, 215, 285 – 286, 377, 383).[39] Foreign imports arriving directly to southern ports comes from Albion (1939, Appendix III) and Historical Statistics of the United States, Series U134 p. 553.

[38] Price per barrel of naval store is assumed to be $2.5 in 1840 following Perry (1968, p. 517).

[39] The value for 1810 is estimated by extrapolating from trends in freight received in tons and the average relationship between tons and value of produce. The Report of the Internal Commerce of the United States for 1888 (p. 191) puts the value of produce received at New Orleans at less than $3.4 million in 1802.

Between 1810 and 1820, the total value of cotton produced in the South almost doubled, and between 1820 and 1830, it increased by another 42 percent. This was the beginning of dramatic expansion of cotton production in the United States as production moved south and west. Relatedly, from the first to the second decade of the nineteenth century, the number of enslaved workers forced to migrate from the upper to the lower South increased from 68,641 to 123,221; between 1820 and 1830, another 134,365 enslaved workers were forced to migrate to the more fertile lands of the lower South where many were obligated to clear the land and plant cotton.[40] This dramatic expansion in demand and production of cotton was the point originally highlighted by North: "it was cotton that initiated the concomitant expansion of income, in the size of the domestic markets, and creation of the social overhead investment… in the Northeast which were to facilitate the subsequent rapid growth of manufactures."[41]The increased demand and supply of cotton is clearly the most important factor in the surge in the South's import capacity between 1810 and 1830.

The total output of other staple crops also increased dramatically in value during these two decades.[42] Between 1810 and 1820, the value of naval stores more than tripled, and between 1820 and 1830 it increased by another 72 percent. Between 1810 and 1830, the sugar and sugar products industry grew from almost nothing to an output valued at more than $8 million, and the value of hemp production increased by a factor of five.

In terms of the later point about the increase in the import capacity of the South, western imports consumed in the South dropped from $3.4 million in 1810 to $200,000 in 1820 and $700,000 in 1830, and foreign imports arriving directly to southern ports also dropped in absolute terms during the same two decades and, more importantly, in relative terms. Some of the decrease in western imports likely represented yearly fluctuations, as seen in port records.[43] For example, as reported in Table 2, the value of produce arriving at New Orleans in 1830 was $22.1 million. In 1831, it jumped to $26.0 million only to fall to $21.8 million in the following year.[44] At the same time, as the antebellum period progressed, more and more foreign imports consumed in the South arrived at northern ports and were then shipped coastwise to the south.

[40] Tadman (1989, p. 11).
[41] North (1961, p. 68).
[42] North (1961) definitely recognized this point. However, those responding to him often simplified his argument so as to make North's argument revolve solely around the expansion of cotton production.
[43] See The Report of the Internal Commerce of the United States for 1888.
[44] Ibid. p. 199.

These estimates have biases that would both over- and underestimate the amount the South imported from the North. In terms of the former, at least some portion of southern staples, albeit a very small share, were consumed in the South. Not accounting for this in Table 2 would overestimate the South overall import capacity and the amount it could purchase from the North. Additionally, we did not include species inflows into the South that represent returns to exports not spent on goods and services from other regions of the county or abroad. The exclusion of species inflows would exaggerate the South's propensity to consume northern goods.[45] However, such inflows were likely a small percentage of the total import capacity of the South throughout the antebellum period. For example, Fishlow's upper bound estimate for species inflows into the South in 1860 represents just under five percent of the South's capacity to import northern goods.[46] For earlier years, there is even less data.[47]

In terms of biases that would underestimate the amount the South imported from the North, the prices quoted in Table 2 are wholesale prices from the region of origin. To the degree to which the South played any role in freight, insurance, banking, and other services that factored into prices increasing to their full distribution values, the estimates above would be downwardly biased in terms of the income flowing into the South. More importantly, the South was potentially importing above its capacity as determined in Table 2. This would have been possible because cotton, given its international importance, was the currency of antebellum America; the import capacity of the South was growing rapidly; and credit to southern plantations was secured on consignment of future crops where the planter often guaranteed that his crop would be a specific number of bales and was liable to penalty if it fell below.[48] At the same time, some have reported southerners moving from cash to credit to pay for northern goods as the antebellum period progressed ,which would infer increased indebtedness.[49] Weighing the biases that would over- and underestimate the amount the South imported from the North, it seems likely that the

[45] Because it assumes all income is spent on consumption.
[46] Fishlow (1965).
[47] It's not exactly clear what Fishlow does for earlier years because his appendices for his work where his calculations are made clear are only available through correspondence with him. Sadly, we have not been able to get hold of the notes. Others, like Uselding, base their estimates for species inflows into the South for earlier years off the proportion of inflows to the import capacity determined by Fishlow for 1860. Uselding (1976. P. 434 fn 11).
[48] Clark (1916, pp. 365-366, 554), Gray (1933, pp. 713-714, 930), and Haskins (1955, p.2).
[49] Haskins (1955, p. 5).

figures in the last column of Table 2 represent a lower bound for the total value of northern goods shipped south.

Next, we must superimpose on this picture the changes in tariff rates in the United States. Between 1789—when the U.S. Constitution was ratified—and 1816, the only function of tariffs was to raise revenue for the federal government.[50] This meant that tariffs had to be low enough to avoid choking off imports. After the War of 1812, the function of tariffs began to change.[51] In 1816, Congress passed a tariff law that, among other things, created a minimum duty of 25 cents a yard on cotton and wool textiles.[52] This was meant to exclude textiles made in India from the U.S. market. Initially, this minimum price was ineffective in keeping textiles produced in Europe—even the coarse textiles that were the most economical—out of the United States. However, between 1818 and 1821, the price of textiles dropped dramatically as a result of the introduction of the power loom. The minimum price stipulation from the tariff of 1816 then closed the U.S. market for coarse textiles to all foreign producers.[53]

Consequently, a substantial part of the increase in southern importation from the North after 1816 came from the change in tariff laws. The South had previously imported coarse textiles to clothe enslaved workers from abroad.[54] With the implementation of a minimum price for cotton and wool cloth and the dramatic reduction in price, this portion of the southern market was carved out for the nascent northeastern textile industry. Indeed, after the tariff on textiles was in place, cotton textiles as a percent of total imports from Great Britain and Ireland to the United States fell dramatically.[55] At the same time, from the late 1810s through the 1830s, the

[50] Clark (1916; pp. 270-1).
[51] To be sure, the revenue raising function continued through the nineteenth century.
[52] In 1824, the minimum valuation of cotton cloth was raised to 30 cents a yard, and in 1828, it was increased to 35 cents.
[53] Southern support for the tariff stemmed from the fact that textiles from India did not use American cotton. Also, there was a clear motivation to create addition demand, which was potentially more stable, for cotton at home. Given the political debate in the following years, the latter motivation only makes sense when the extreme disruptions of the War of 1812 are considered. Finally, it was argued that the tariff, through allowing American firms to eventually compete with those from Britain, would eventually make cotton textiles cheaper. See Ibid. (pp. 275 - 279), North (1961, p. 193), Albion (1939, p. 63), and Rockman (2024, p. 45).
[54] North (1961, p. 169). Or conversations in contemporary newspapers, for example: *The Charleston Daily Courier*, Thursday, June 20th, 1822. Page 2. Charleston, South Carolina.
[55] For example, between 1806 and 1808, cotton textiles made up 43.1 percent of British and Irish imports to the United States. Between 1827 and 1830, cotton textiles only made-up 21.1 percent of all British and Irish imports (Clark, pp. 246 – 247).

cotton textile industry in the Northeast rapidly expanded as it began to change from an artisanal to a factory mode of production.

Textile entrepreneurs in New England were aware of the tariff's importance to their companies' financial viability. Abbott Lawrence, a major textile producer in Lowell and Lawrence, Massachusetts, expressed this concern time and again in correspondence with Nathan Appleton, another central figure in textile factory production in Massachusetts who represented the state in the House of Representative from 1831 to 1833 and in 1842.[56] In an 1832 letter, for instance, Lawrence beseeched Appleton to not vote for a bill to reduce the minimum price of textiles imported to the United States: "what is the real object of this bill, but to destroy forever the whole system of manufacturing?" Their intense correspondence about the tariff continued throughout Appleton's time in office, especially once Congress renegotiated the tariff. For instance, during Appleton's second term in 1842, when a similar reduction in the tariff on coarse textiles was being debated, Lawrence told Appleton that such a reduction would be "ruinous" to the New England textile industry.[57]

To further highlight this point, let us look at exactly what the South was demanding from the North in 1840 and 1860—when better data exists on what and how much was being produced in different parts of the United States.

Re-evaluating regional demand in 1840

As we saw in the previous section, the expansion of the southern market from the late 1810s to 1830 and its protection against imports of coarse textiles manufactured abroad starting in 1816 seems to have been central for creating a market for the early mechanized textile industry in the United States. However, this picture is still incomplete, as it does not tell us about the importance of the southern market for textile manufacturing specifically. Consequently, in this section, we overlay our understanding of the growth of the southern market for northern manufactured goods with specific estimates of the percent of textiles produced in the Northeast and consumed in the South and elsewhere in 1840 and 1860. As we will see, for northeastern textiles, the southern market was key.

[56] Lawrence, Massachusetts was named for Abbott Lawrence because of the important role he played in developing it through locating textile production there.
[57] Appleton, Nathan, 1779-1861. Nathan Appleton correspondence with and material about Abbott Lawrence, 1831-1856 (MS Am 1557).

To show the centrality of the southern market, we calculate the supply and demand for textiles in the Northeast, Middle Atlantic, South, and West using data on textile production and income per capita in the different regions and calculating a marginal propensity to consume textiles from income and thus the amount purchased in each region.[58]

We break up the North into the Northeast—which includes Connecticut, Rhode Island, Massachusetts, New Hampshire, Vermont, and Maine—and the Middle Atlantic—New York, New Jersey, and Pennsylvania—because the North did not advance evenly in textile production. New England was by far the most productive: in the early 1830s, for instance, Connecticut had 140,000 spindles, Rhode Island 240,000, and Massachusetts 340,000. In contrast, New York had just 157,000 spindles—not much more than Connecticut. Likewise, Pennsylvania had only about half the spindles as Massachusetts in operation, and New Jersey had much less.[59] By 1840, New England produced more than twice as many textiles by value as the Middle Atlantic region, even though New England had only half the population.[60]

In Table 3, we report data and estimates for 1840. The first column is the total regional production of wool, cotton, silk, flax, and mixed textiles produced in or outside the home as reported in the Census of 1840. The value in parentheses includes net imports of textiles.[61] The third column is total textile production divided by the region's population. The fourth column is the average income per person by region,[62] and the fifth is the per capita consumption of textiles, which is equal to the marginal propensity to consume textiles times the average per capita income of the region.

[58] Uselding (1976) used this method to calculate the supply and demand for transportable manufactured goods in the North, South, and West in 1840. Here we extend his method by breaking up the North into the Northeast and Middle Atlantic and looking at textile production and consumption.

[59] Likewise, New England had dramatically more looms in 1831 than any other region of the country. See McLane (1832; I, 974, 988, II, 52) and Clark (1916, pp. 544).

[60] See 1840 Census – summary of manufacturing output by states.

[61] Imports of wool and cotton manufactures (including semi-manufactured cotton goods) was $11 and $7 million in 1840, respectively (Series U106 & 109 in US Historical Statistics). Cotton manufactured goods exported abroad represented $4 million in 1840 (U81); https://www2.census.gov/library/publications/1960/compendia/hist_stats_colonial-1957/hist_stats_colonial-1957-chU.pdf.

[62] This comes from Easterlin (1961) and Gallman (1966). Easterlin reports income per capita in the Northeast, the Middle Atlantic, the South, and the West as a percent of national income per capita. We slightly manipulated the rounding on these figures so that total estimated consumption of textiles was equal to production.

Following past literature, we assume that the marginal propensity to consume is the same for individuals in different regions of the country.[63] As a result, the marginal propensity to consume textiles equals the total value of textiles manufactures consumed per capita in the United States divided by income per capita for the county as a whole. This assumption of individuals having the same marginal propensity to consume textiles signifies that the proportion spent on textiles out of income is the same for all throughout the United States. Higher income areas like the Northeast and Middle Atlantic would thus spend more on textiles per capita than the South.

Regional surpluses and deficits, which are reported in the eighth and ninth columns of Table 3, are then calculated by comparing total regional consumption to total regional production. As we can see from these columns, the Northeast is the only region with surplus textile production. These surpluses and deficits represent reciprocal ends of trade flows between the respective regions of the country.

The final column in Table 3 shows the percent of textiles in New England (excluding home production) consumed by New England, the Middle Atlantic, the South, and the West. As we show, the increased detail from analyzing production and demand surpluses and deficits paints a complementary picture to that gained from analyzing the South's import capacity. First, if we look at the figures that consider net foreign trade in textiles, it reveals that the Middle Atlantic was likely a very small market for New England textiles—consuming as little as 12.8 percent of total textiles produced in New England in 1840. New England itself consumed around 26.5 percent of its production. Potentially, there was some interregional trade in textiles between New England and the Middle Atlantic. However, this just shifts a portion of the percent consumed from one region to the other without increasing the total of the two regions.

[63] Uselding (1976).

Table 3: Regional Demand and Supply Surpluses and Deficits for Textiles in 1840

Region	Total Textiles Produced in Region (000's) Including (Net Imports)[64]	Total Population (000's)	Textiles Produced Per Person Including (Net Imports)	Average Income Per Person	Per Capita Consumption of Textiles at APC_m including (Net Imports)	Total Consumption of Textiles (000's) Including (Net Imports)	Surplus (+) (000's) Including (Net Imports)
New England	$48,394	2,286	$21.17	$123.38	$6.79 ($7.86)	$15,512 ($17,964)	$32,882 ($30,430)
Middle Atlantic	$23,078 ($37,078)	4,531	$5.09 ($8.18)	$127.12	$6.99 ($8.1)	$31,677 ($36,686)	-- ($392)
South	$13,527	7,440	$1.82	$75.52	$4.15 ($4.81)	$30,903 ($35,789)	--
West	$3,548	2,968	$1.20	$64.03	$3.52 ($4.08)	$10,451 ($12,104)	--
Total	$88,547 ($102,547)	17,225	$5.14 ($5.95)	$93.47	$5.14 ($5.95)	$73,031 ($84,578)	-- ($392)

Source: Authors' calculations using data from Uselding (1976), Easterlin (1961), Tyron (1917), Historical Statistics of the United States, Colonial Times to 1970: Series U 213 – 224, and Compendium of the Sixth Census, p. 356 – 361. Here we assume 50% of household-manufactured goods are textiles. We also assume that the Middle Atlantic consumed 45 percent, New England consumed 25 percent, the South consumed 25 percent, and the West consumed 5 percent of foreign textiles imported to the United States.

Foreign exports of cotton and wool were valued at $4 million in 1840—representing 8.5 percent of the total amount of textiles produced in New England.[66] In contrast, the South consumed as much 35.4 percent of all textiles produced in New England in 1840—making it by far the largest market for this industrializing sector.

These estimates represent an upper bound, because we assume that the Middle Atlantic consumed 45 percent of all textiles imported from abroad. New England consumed 25 percent. The South consumed 25 percent, and the West consumed 5 percent. However, if we assume the South consumed a much larger quantity of foreign textiles, the results still hold. For example, if

[64] This includes wool, cotton, silk, flax, and mixed textiles made both in and outside the home.
[65] This figure excludes household production in New England.
[66] This figure excludes home production in New England.

the South consumed 35 percent of foreign textiles imported into the United States, the Middle Atlantic 40 percent, New England only 20 percent, and the West still 5 percent, the southern market would still have absorbed 31.6 percent of all New England textiles in 1840. In comparison, New England would consume 28.4 percent of the textiles it produced, the Middle Atlantic would consume 14.7 percent, the West 16.8 percent, and foreign exports would make up 8.5 percent.

Consequently, even if we assume that the South had a much greater proclivity to consume foreign goods, in 1840 it would still be the largest market for New England's main industry. Yet these secondary figures should be treated as a lower bound, given they assume that the South consumes almost as much foreign textiles as the Middle Atlantic—even though it had an income per capita 40 percent less than New York, New Jersey, and Pennsylvania.

In Table 4, we provide data on the total value of textiles produced, the population, and income per capita in the Northeast, the Middle Atlantic, the South, and the West along with estimates for the per capita consumption of textiles, total regional consumption, and production surpluses and deficits in 1860.

Here we show that there were important changes in textile production and demand in the two decades before the Civil War. Because of an increase in regional production, the Middle Atlantic ceased to be a market for New England textiles. At the same time, the western market grew considerably, while per capita levels of production remained low. As a result, the West consumed as much as 29.9 percent of textiles produced in New England in 1860.

Table 4: Regional Demand and Supply Surpluses and Deficits for Textiles in 1860

Region	Total Textiles Produced in Region (000's) Including (Net Imports)[67]	Total Population (000's)	Textiles Produced Per Person Including (Net Imports)	Average Income Per Person	Per Capita Consumption of Textiles at APC_m ıncluding (Net Imports)	Total Consumption of Textiles (000's) Including (Net Imports)	Surplus (+) (000's) Including (Net Imports)	Deficit (-) (000's) Including (Net Imports)	% of New England Textiles Consumed in Different Regions[68]
New England	$157,900	3,135	$50.36	$197.60	$15.65	$49,081	$108,819	--	30.8%
					($18.81)	($58,967)	($98,933)		(27.5%)
Middle Atlantic	$108,202	7,459	$14.51	$189.65	$15.02	$112,065	--	$3,863	2.5%
	($173,202)		($23.22)		($18.05)	($134,637)	($38,565)	--	(0.0%)
South	$34,170	11,058	$3.09	$103.97	$8.24	$91,087	--	$56,917	36.2%
					($9.9)	($109,434)		($75,264)	(35.8%)
West	$22,438	9,063	$2.48	$98.14	$7.77	$70,463	--	$48,025	30.5%
					($9.34)	($84,655)		($62,217)	(29.9%)
Total	$322,710	30,716	$10.51	$132.62	$10.51	$273,615	--	$108,805	100.0%
	($387,710)		($12.62)		($12.62)	($328,726)	($38,565)	($137,481)	(93.0%)

Source: Authors' calculations using data from 1860 Census of Manufacturing, Easterlin (1961), Tyron (1917), Historical Statistics of the United States, Colonial Times to 1970: Series U 213 – 224, and Compendium of the Sixth Census, p. 356 – 361. Here we assume 50% of household manufactured goods represent textiles. Additionally, we assume that the Middle Atlantic consumed 35 percent, New England consumed 20 percent, the South consumed 25 percent, and the West consumed 20 percent of foreign textiles imported to the United States.

[67] This includes wool, cotton, silk, flax, and mixed textiles both made in and outside the home.

[68] This figure excludes household production in New England.

Despite these changes, there were important similarities between textile production and consumption in 1840 and 1860. New England still consumed around a quarter of the textiles it produced, and textiles exports represented seven percent of total output in New England. Most importantly, the South was still the largest market for textiles produced in New England—consuming as much as 35.8 percent in 1860.

Even if we assume the South consumed a larger share of foreign textile imports—35 percent instead of the 25 percent assumed in Table 4—the southern market would still represent 30.9 percent of the market for New England textiles in 1860—just one percentage point less than the West. However, this would mean that the South was consuming almost 17 percent more foreign textiles by value than the Mid-Atlantic even though its per capita income was around half that of New York, New Jersey, and Pennsylvania. Additionally, it would mean that the South consumed 133 percent more foreign textiles by value than the West even though the southern population was only 22 percent higher than the West and the South's income per capita was only 6 percent higher. Thus this second set of figures represent an extreme lower bound, allowing us to confidently say that the southern market remained the most important driver for northeastern textile industrialization up to the end of the antebellum period.

The Source of Demand in the South

As we have seen, southern import capacity increased dramatically from the late 1810s through the 1830s. A substantial portion of this demand was funneled to the nascent northeastern textile industry through changes in tariff laws—making the South the largest market for these goods at least until the start of the Civil War.

However, we have yet to specifically identify where this demand for New England textiles came from in the South. The logic of import capacity would imply that it came from those that were exporting—i.e., the plantation economy. Many social scientists have commented on southern plantations being a key source of demand for northern textiles.[69] However, we can elaborate further on this point.

To highlight the importance of southern plantations in the demand for northeastern textiles, let's look at who in the South was producing home manufactured goods, using data from

[69] For example, Tyron (1911, pp. 186, 374) highlights that home manufacturing was less common in the South where individuals were connected by waterways to the market and where enslaved workers were located.

the 1840 and 1860 census. During this period, individuals, families, and workers produced a number of goods for home consumption—some of which would be labeled manufactured goods. The most important category of manufactured goods produced at home were textiles. Throughout the antebellum period, southerners produced a lot of manufactured goods at home. In 1840, for example, the total value of southern household manufactures was $16.1 million—85 percent higher than the value for the North. In terms of per capita production in the same year, southern individuals produced $2.18 of home manufactured goods on average; northerners only produced $1.30 on average.[70] Consequently, households that produced a significant amount of home manufactured goods—of which a significant proportion were likely textiles for home consumption—were not the source of southern demand for northern manufacturing goods. Conversely, populations that were not producing home manufactured goods in the South would likely be the source of demand for Northeastern textiles.

Using the following regression, we analyze the log of the total value of home manufactured goods produced in county i, H_i, across counties in the South in 1840:

$$H_i = \alpha + \beta FP_i + \gamma EP_i + \sum_j \theta_j C_{ji} + \varepsilon_i \quad (1)$$

In equation (1), FP_i is the log of the free population in county i. EP_i is the log of the enslaved population in county i, and the final term, $\sum_j \theta_j C_{ji}$, represents a series of dummy variables that control for the percent urban of the county, if the county was located on a waterway, and if the county was in the upper South or the lower South.[71]

In Table 5, we present the results from the regression outline in equation (1). As we show via regressions I through IV, a higher free population in a given county is associated with a large increase in the value of home manufacturing. In contrast, for counties better connected to the market—through having large towns or cities or water access—home production was significantly less. At the same time, a larger enslaved population in a county was associated with a significant reduction in the value of home manufactured goods produced—even after

[70] For data by state on household production of manufacturing goods in 1839, see Tryon (1917).
[71] All of this data comes from the 1840 Census which was compiled by Haines et al. (2010).

controlling for whether the county was in the upper or lower South, the degree of its urbanization, and its access to water.

These results do not suffer from multicollinearity. The mean VIF score for each of the regression is between 1.64 and 1.37 and the results are robust to specification. If the regression is specified in a linear fashion as opposed to log-linear, the results hold.[72]

Table 5: Regression of Home Manufacturing by County in the South in 1840

	I	II	III	IV
Log of free population in county	1.946*** (0.199)	2.171*** (0.175)	2.184*** (0.192)	2.048*** (0.213)
Log of enslaved population in county	-0.528*** (0.100)	-0.514*** (0.095)	-0.358*** (0.087)	-0.330*** (0.089)
Dummy for % urban between 10 – 50%		-2.025*** (0.680)	-1.391* (0.721)	-1.374* (0.704)
Dummy for urban 50% or greater		-7.028*** (1.473)	-6.541*** (1.491)	-6.306*** (1.446)
Dummy for if located on waterway			-1.350*** (0.232)	-1.392*** (0.242)
Dummy for if located in New South				-0.311 (0.243)
	N = 505 R^2 = 0.24	N = 505 R^2 = 0.31	N = 494 R^2 = 0.33	N = 494 R^2 = 0.33

Source: Regression analysis of Haines et al. (2010) sample of Census of 1840. A number in parentheses represents robust standard errors. '*', '**', and '***'represent statistical significance at the 10, 5, and 1 percent level, respectively.

For 1860, we can look at home manufacturing in more detail by analyzing across farms instead of counties. In Table 6, we report regression results on the log of home manufacturing by

[72] However, a linear specification does suffer from multicollinearity. Hence the log-linear specification in Table 5.

farm for a sample of over 5,000 farms in cotton-producing counties in 1860.[73] For these regressions, we utilize a dummy for if the farm has between one and nine enslaved workers, 10 and 49, or 50 or more. We use this specification because many farms in the sample did not have any enslaved workers.

Table 6 shows that in 1860, the results are very similar to those gleaned from analyzing county level data in 1840. A larger free population on a farm was associated with an increase in home manufacturing. In contrast, farms that were better connected to the market—either by being located in a county with a town of more than either 2,500 or 25,000 individuals or a county with water or railroad access, were associated with a dramatic decrease in home manufacturing. Finally, if a farm had enslaved workers, it was also associated with a large reduction in home manufacturing—even after controlling for state fixed effects, the urban development of county, and access to commerce. This is the case for farms that had between one and nine, 10 and 49, or 50 or more enslaved workers. For example, after controlling for rail and water access, the degree of urban development of the county, and the white population in residence, farms with between one and nine enslaved workers were associated with a 14.1 percent decrease in the production of home manufactured goods. This means that not only were enslaved workers unlikely to produce home manufactured goods, but that when they were present, the white population on the farm was also less likely to be engaged in such activity.

As we see from Table 6, farms with 50 or more enslaved workers were associated with a 36 percent decrease in the value of home manufactured goods—a significantly larger value than on farms with fewer enslaved workers. Again, this would mean that all those residing on the farm, both enslaved and free, were less likely to be engaged in home manufacturing.

These results are in accord with the broader literature on the topic. For example, Gray concludes that the continuation of home manufacturing into the later antebellum period "came more and more to depend upon the inability to achieve a commercial economy on account of geographic isolation, poor soil, or rough topography."[74]And Hahn, who analyzes census and estate records for yeomen farmers in the Georgia upcountry during the antebellum period, finds

[73] This sample was taken by Parker and Gallman (1992).
[74] Gray (1933, p. 456).

that the vast majority owned spinning wheels and looms that they used to manufacture textiles to fulfill domestic needs.[75]

Table 6: Regression of Home Manufacturing by Farm in the South in 1860

	I	II	III	IV
Log of free population on farm	0.556*** (0.048)	0.545*** (0.175)	0.544*** (0.047)	0533*** (0.046)
From 1 to 9 enslaved workers on farm	-0.213*** (0.059)	-0.176*** (0.059)	-0.171*** (0.059)	-0.151*** (0.057)
From 10 to 49 enslaved workers on farm	-0.252*** (0.073)	-0.166** (0.073)	-0.154** (0.073)	-0.095 (0.072)
More than 50 enslaved workers on farm	-0.734*** (0.193)	-0.573*** (0.195)	-0.549*** (0.195)	-0.443** (0.192)
Dummy for in county with water access		-0.637*** (0.057)	-0.625*** (0.057)	-0.581*** (0.060)
Dummy for in county with railroad access		-0.132** (0.052)	-0.090* (0.053)	-0.436*** (0.059)
County contains town with a population greater than 2,500			-0.302*** (0.100)	-0.342*** (0.101)
County contains town with a population greater than 25,000			-0.688* (0.401)	-0.817*** (0.406)
State fixed effects				Yes
	N = 5,227 R^2 = 0.03	N = 5,212 R^2 = 0.05	N = 5,212 R^2 = 0.06	N = 5,212 R^2 = 0.12

Source: Regression analysis of Haines et al. (2010) sample of Census of 1840. A number in parentheses represents robust standard errors. '*', '**', and '***'represent statistical significance at the 10, 5, and 1 percent level, respectively.

[75] Hahn (2006, pp. 30 & 67).

In contrast, in her study of home manufacturing, Tryon reports that planters told their overseers not to use the time of their enslaved workers in home manufacturing.[76] Indeed, in terms of the pay structure and the likelihood of continuing at a given post or obtaining another position, the dynamics of the overseer market incentivized their focus on producing a large cotton crop and ignoring other things—including production of home manufactured goods.[77]

Consequently, it seems that free populations in rural areas in the South were producing large quantities of home manufacturing goods—a significant portion of which were textiles for home consumption.[78] In contrast, plantations that contained large enslaved populations produced significantly fewer home manufacturing goods. As a result, even though enslaved workers were poorly clothed, southern plantations likely represented a very large portion of the market for New England textiles.

In fact, the amount of money southern planters spent on northern textiles was a common theme in antebellum newspapers. Some planters asserted that prices and thus the total cost of clothing purchased for enslaved workers would go down if the tariff on coarse textiles was less or eliminated.[79] The *New York Commercial Advertiser* observed in the early 1820s that planters spend around $10 million on coarse textiles produced in New England.[80] While this might seem extravagant, it is at least somewhat in line with what we have seen above. The South demanded much from the Northeast—most of it in the form of textiles. And the source of southern demand for textiles was predominantly plantations.

Other contemporary observers noted that southern plantation demand stimulated northern industrialization, improved the balance of trade, and reduced costs of textiles in the long run.[81] But all contemporaries, especially those at either end of the trade in coarse textiles, seem to have recognized the importance of the plantation South in creating a market for northern textiles.

[76] Tyron (1917).
[77] Beckert and Stelzner (2025).
[78] Tyron (1911).
[79] For example, see Mississippi Gazette, Natchez, Mississippi, Wed, Oct. 27, 1830, p. 2.
[80] Republished in The Charleston Daily Courier, Charleston, South Carolina, Thurs., June 20, 1822, p. 2.
[81] For example, see Nile's Register, November 17, 1827 p. 14; St. Louis, Missouri or New York Daily Herald, New York, New York, Sun. Mar. 22, 1846 p. 1.

Summary remarks

Understanding the exact connection between the slave economy of the U.S. South and the industrializing economy of the North has become one of the most important—and contentious—questions debated by scholars of nineteenth-century U.S. history. This paper has challenged the findings of economic historians who have downplayed the importance of the southern plantation economy as a market for northern industry. By closely analyzing shipping manifests, patterns of trade, the South's import capacity, regional production and demand surpluses and deficits, and the structure of Southern demand for textiles, we have shown that the slave economy of the southern states was a crucial—indeed, the single most important—market for northeastern textiles. We have demonstrated that the South mattered for the North not just as a source of raw cotton and a field for profitable investments in banking, insurance and shipping, but as a market for the product of its most advanced and important industrial sector—cotton textile production. The findings suggest that the analysis of many contemporaries—in both the North and the South—that the two sections depended on one another for their cutting-edge industries (textile sin the North, Cotton agriculture in the South) and economic growth was correct. Despite the great economic, political, social, and ideological differences between the two regions, each mutually enabled the other's distinct developmental path. The findings of this paper further confirm that until 1865, when slavery was finally abolished, the development of U.S. capitalism rested to a significant degree—and across regions—on the institution of slavery

References

Albion, R. G. (1939). *The Rise of the Port of New York. New York*.

Andrews, I. D. (1854). *Communication from the Secretary of the Treasury Transmitting..* (Vol. 4). B. Tucker.

Beckert, S. (2014). *Empire of Cotton: A Global History*. Knopf.

Beckert, S., & Rockman, S. (Eds.). (2016). *Slavery's capitalism: A new history of American economic development.* University of Pennsylvania Press.

Beckert, S., & Stelzner, M. (2025). Productivity Growth of Enslaved Workers. Working Paper.

Burnard, T., & Riello, G. (2020). Slavery and the new history of capitalism. *Journal of Global History*, 15(2), 225-244.

Callender, G. S. (1902). The early transportation and banking enterprises of the states in relation to the growth of corporations. *The Quarterly Journal of Economics*, 17(1), 111-162.

Clark, V. S. (1916). *History of manufactures in the United States: 1607-1860* (Vol 1). Carnegie institution of Washington.

Darity Jr, W. A., & Mullen, A. K. (2020). *From Here to equality: reparations for Black Americans in the twenty-first century.* UNC Press Books.

Du Bois, W. E. B. (1935). *Black Reconstruction.* New York: Harcourt, Brace.

Easterlin, R. (1960). Interregional differences in per capita income, population, and total income, 1840-1950. *Trends in the American economy in the nineteenth century*, 73-140.

Fishlow, A. (1964). Antebellum interregional trade reconsidered. *The American Economic Review*, 54(3), 352-364.

Fishlow, A. (1965). *American Railroads and the Transformation of the Ante-bellum Economy*. Harvard University Press. Cambridge, MA.

Gallman, R. E. (1966). Gross national product in the United States, 1834–1909. In *Output, employment, and productivity in the United States after 1800* (pp. 3-90). NBER.

Gallman, R. E. (1970). Self-sufficiency in the Cotton Economy of the Antebellum South. *Agricultural History*, 44(1), 5-23.

Gray, L. C. (1933). *History of agriculture in the southern United States to 1860*. Contributions to American economic history, no. 7.

Haines, M.R., and Inter-university Consortium for Political and Social Research. (2010). Historical, Demographic, Economic, and Social Data: The United States, 1790-2002. Inter-university Consortium for Political and Social Research [distributor], 2010-05-21. https://doi.org/10.3886/ICPSR02896.v3

Hahn, S. (2006). *The roots of southern populism: yeoman farmers and the transformation of the Georgia Upcountry, 1850-1890*. Oxford University Press.

Haskins, R. W. (1955). Planter and cotton factor in the old south: Some areas of friction. *Agricultural History*, 29(1), 1-14.

Herbst, L. A. (1974). Interregional commodity trade from the north to the south and American economic development in the antebellum period. Ph.D. Dissertation, University of Pennsylvania.

Herbst, L. A. (1975). Interregional commodity trade from the north to the south and American economic development in the antebellum period. The Journal of Economic History, 35(1), 264-270.

Herbst, L. A. (1978). Patterns of American Interregional Commodity Trade: North to South, 1824–1839. *The American Economist*, 22(2), 61-66.

Hilt, E. (2017). Economic history, historical analysis, and the "New History of Capitalism". *The Journal of Economic History,* 77(2), 511-536.

Ingle, Edward. (1896). *Southern Sidelights.* New York.

Johnson, E. R., Van Metre, T.W., Huebner, G.G., Hanchett, D. S. (1915). *History of domestic and foreign commerce of the United States.* Carnegie institution of Washington.

Kettell, T. P. (1860). *Southern Wealth and Northern Profits: As Exhibited in Statistical Facts and Official Figures: Showing the Necessity of Union to the Future Prosperity and Welfare of the Republic.* GW & JA Wood.

Lipsey, R. E. (1994). *US foreign trade and the balance of payments, 1800-1913.*

McLane, L. (1832). *Report of the Manufacture*.

North, D. C. (1961). *The Economic Growth of the United States, 1790-1860*. New York: WW Norton.

Olmsted, F. L. (1862). *The Cotton Kingdom: A Traveller's Observations on Cotton and Slavery in the American Slave States. Based Upon Three Former Volumes of Journeys and Investigations.*. (Vol. 2). Mason brothers;[etc., etc.,].

Olmstead, A. L., & Rhode, P. W. (2018). Cotton, slavery, and the new history of capitalism. *Explorations in Economic History*, 67, 1-17.

Parker, W. and Gallman, R. (1992). Southern Farms Study, 1860. Inter-university Consortium for Political and Social Research [distributor]. https://doi.org/10.3886/ICPSR07419.v1.

Perry, P. (1968). The naval-stores industry in the Old South, 1790-1860. *The Journal of Southern History*, 34(4), 509-526.

Ransom, R. L., & Sutch, R. (1977). *One kind of freedom: The economic consequences of emancipation.* Cambridge University Press.

Rhode, P. W. (2024). What fraction of antebellum US national product did the enslaved produce?. *Explorations in Economic History*, 91, 101552.

Rockman, S. (2024). *Plantation Goods: A Material History of American Slavery.* In Plantation Goods. University of Chicago Press.

Schorger, A. W., & Betts, H. S. (1915). *The naval stores industry* (No. 229). US Department of Agriculture.

Stelzner, M., & Beckert, S. (2024). The contribution of enslaved workers to output and growth in the antebellum United States. *The Economic History Review*, 77(1), 137-159.

Switzler, W. (1888). *Report on the internal commerce of the United States.* Treasury Department.

Wright, G. (2006). *Slavery and American economic development*. LSU press.

**Tadman, M. (1989*).* *Speculators and slaves: masters, traders, and slaves in the Old South.* Madison.

Towne, M., & Rasmussen, W. (1960). Farm gross product and gross investment in the nineteenth century. *Trends in the American economy in the nineteenth century*, 255-316.

Tyron, R. (1917). Household manufactures in the United States, 1640 – 1860: a study in industrial history. University of Chicago Press. https://babel.hathitrust.org/cgi/pt?id=hvd.hb3acd&seq=7.

Uselding, P. J. (1976). A note on the inter-regional trade in manufactures in 1840. *The Journal of Economic History*, 36(2), 428-435.

Williams, E. (1944). *Capitalism and slavery*. UNC Press Books.