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Wealth Accumulation in Virginia in the Century before the Civil War

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The basic facts of American economic growth and economic structure before circa 1840 have yet to be documented.[1] This shortcoming represents a major obstacle to our understanding because by 1840 two defining features of U.S. economic history were already in place. First, by 1840 economic growth was already underway in the United States (and in its distinctive regions – what we call the Northeast, the Midwest, and the South). Second, by 1840 the South and the North had generated profoundly different economic and social structures. The Northeast, a free-labor economy and society, was emerging as one of the world's first urban–industrial economies. The South, a slave-labor economy and society, was emerging as the richest and most powerful slave society the world would ever see. Documenting the quantitative record before 1840 promises to advance our understanding of the origins and meanings of both American economic growth and of North/South cleavage.

This paper offers a modest addition to our historical knowledge, presenting one perspective on the American economy and society in the period of

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[1] Gallman's estimate of GNP for 1840 is the generally accepted start of the record of U.S. national product. For the period before, substantially more empirical work is required to move beyond various "conjectural estimates" which extrapolate back from that value. See Paul David, "The Growth of Real Product in the United States Before 1840: New Evidence, Controlled Conjectures," *The Journal of Economic History*, 27 (1967): 151–97; and Thomas Weiss, "Economic Growth Before 1860: Revised Conjectures," in Thomas Weiss and Donald Schaefer (eds.), *American Economic Development in Comparative Perspective* (Stanford, 1994), pp. 11–27, and references there.

1755–1860. Adopting a narrow geographic focus, I document a century-long record of wealth accumulation in Virginia. Arguably the pre-eminent colony and state in the first two centuries of American economic history, Virginia receded from national importance in the wake of westward expansion and free immigration. Nonetheless, as the most populous of the founding states, any account of the history of economic growth (or not) in the early national period should include developments in Virginia. Similarly, any account of the comparative economic performance of the Northern free-labor and Southern slave-labor economies also will need to consider Virginia. Although on the periphery of the burgeoning cotton economy that was the center of the southern slave economy in the antebellum period, Virginia remained the largest and most powerful of the slave states on the eve of the Civil War.

I

This paper presents a view of Virginia's economy in the century before the Civil War using inventories of deceased men's estates as recorded by Virginia's County Courts.[2] The County Courts supervised and documented the routines of inheritance, compiling a hodgepodge of handwritten wills, inventories, and accounts in "Will Books" that survive and offer a rich but challenging source of historical evidence. The inventories are the "inventory and appraisal" of the personal estates of decedents. Generically such inventories are now commonly referred to as "probate records" (after the probate courts responsible for administering the law of inheritance). As a rule, the inventories list and value the wide range of personal property held by decedents but they do not include real estate. The lack of data on real estate is an obvious and important gap in the view we get of the Virginia economy. But that shortcoming has to be weighed against the gains from looking over more than one hundred years using a consistent source of data.[3]

[2] Women were about 13.5% of the decedents identified in the Will Books. In this paper I exclude the estates of female decedents because women had very limited rights to own and control property. An unmarried woman (*femme sole*) had full legal standing to own and dispose of her real and personal property, but if married a woman's property rights were subordinated to those of her husband. See Elizabeth Bowles Warbasse, *The Changing Legal Rights of Married Women, 1800–1861* (New York, 1987 [reprint of 1960 dissertation]), pp. 5–48. My understanding of these issues relies on Catherine L. McDevitt, "Women in a Virginia Real Estate Market: 1782–1858" (unpublished manuscript, 2001), and sources there on the legal status of women in Virginia in this period.

[3] There is no source of data for Virginia decedents' real estate that is comparable to the probate records on personal estate. It is possible to use tax, deed, and other sources to develop estimates of real estate wealth linked to probate data; probably the best known example is the work of Alice Hanson Jones, *American Colonial Wealth, Documents and Methods* (New York, 1978), and *Wealth of a Nation to Be: The American Colonies on the Eve of the Revolution* (New York, 1980).

To organize the analysis and discussion, I use three categories to describe decedents' personal property: slaves, financial assets, and capital. Slaves were the single largest component of personal wealth throughout the period. (In this category I also include the occasional indentured servant scattered among a few of the eighteenth century inventories.)[4] Financial assets were mostly personal obligations (bonds, notes, open accounts), but they also include cash, bank deposits, and other nonpersonal assets.[5] Finally, capital (physical capital) embraces the wide range of other personal property that people owned in the Old Dominion and contributed to domestic or market production. It includes livestock; farm tools, equipment, and supplies; furniture, furnishings, and household supplies; as well as various items, personal (e.g. apparel or jewelry) or otherwise (e.g., blacksmith or carpenter tools). In practice, capital is the residual category, calculated as the difference between a decedent's total personal estate and the value of his slaves and financial assets.

For the current paper, I use summary data on more than five thousand inventories from the Will Books of six counties drawn from the two main regions of the slave economy of Virginia: Tidewater and Piedmont. The Tidewater extends from the Atlantic coast west to the "fall line," where river rapids mark the eastern edge of the Piedmont. The Piedmont, the broad central plateau of the Old Dominion, extends to the Blue Ridge Mountains. Taken together, these regions comprised over three-quarters of the economy and society of Virginia on the eve of the American Revolution. As late as the eve of the Civil War, the Tidewater and Piedmont still included over 85 percent of Virginia's slaves and slave holders, as well as the majority of the state's free population (with the Shenandoah Valley and what would become West Virginia accounting for the rest of the state).[6] As early as the time of the American Revolution the frontier had long ago passed through Tidewater, Virginia and through to the western edge of the Piedmont.[7]

A sampling approach within counties was not used; rather, these wealth data represent an exhaustive listing of all inventories located in the microfilm

[4] There are a total of 28 servants included with more than 3200 slaves in the Virginia inventories from the Colonial period. All but three of the servants were found in 18 different inventories from Richmond, the oldest Tidewater county in the study.

[5] Other nonpersonal financial assets included state bonds, and "shares" or "stocks" or "bonds" of banks, canal companies, and railways.

[6] For the regions of Virginia see Joseph Clarke Robert, *The Tobacco Kingdom* (Gloucester, MA, 1965 [reprint, originally 1938]), p. 17.

[7] Lewis Cecil Gray, *History of Agriculture in the Southern United States to 1860*, 2 vols. (Gloucester, MA, 1958 [reprint, originally 1933]); Vol. 1, pp. 117–118; and Allan Kulikoff, *Tobacco and Slaves, The Development of Southern Cultures in the Chesapeake, 1680–1800* (Chapel Hill and London, 1986), pp. 92–97, 141–48. See also Richard R. Beeman, *The Evolution of the Southern Backcountry. A Case Study of Lunenburg County, Virginia 1746–1832* (Philadelphia, 1984); and Philip D. Morgan and Michael L. Nichols, "Slaves in Piedmont Virginia, 1720–1790," *William and Mary Quarterly*, 46 (1989): 211–51.

records of the Will Books of the County Courts of the selected counties.[8] The inventory data set began as a listing of inventories which I compiled in order to identify estates of the planter elite of Virginia in twelve counties in the period of 1820–1860 (for a larger study of the slave economy of Virginia). For the current project, I extended the list of inventories for five counties back to before the American Revolution. Unfortunately, the relevant records for Henrico County in the 1760s and 1770s were destroyed, apparently by fire during the War of 1812. I collected inventories from nearby Surry County to fill the resulting gap in the data for the eighteenth century.[9] Summary data were collected for each inventory, including the decedent's name, total inventory value, number and value of slaves, cash, other financial assets (bonds, etc.), real estate (mentioned in fewer than five percent of estates), and dates of appraisal and/or recording. Occasionally I also gathered information from wills and other documents, for example to identify the sex of a decedent or the date of an inventory.[10]

To put the Virginia wealth data into perspective, it helps to note that they are drawn from the same sort of sources that Alice Hanson Jones used for her oft-cited research on *American Colonial Wealth*. Using a sampling approach, Jones assembled a sample of 919 estate inventories to represent wealth-holdings in the thirteen colonies in the year 1774. Jones went to heroic lengths to extend her estate data in two ways, adding evidence on the personal characteristics of decedents (e.g., age and occupation), and on real estate holdings. My more modest data do not cover decedents' real estate, and sex is the only personal characteristic enumerated. Jones offers a much fuller picture of wealth and wealth-holders than I can compose. That said, the Virginia data do have two advantages over Jones's data; first they offer a view of wealth over time, and second, with their much larger number of observations sampling, error is less of a concern.[11]

[8] Inventories were recorded along with a jumble of wills, estate accounts, and other documents, so it would not be surprising if some were missed. However, each microfilm Will Book was scanned at least twice.

[9] We collected Surry County inventories for the period 1755–1790. As a result of the gap in the Henrico data, I have two different consistent series on Virginia wealthholdings: one for the period 1780–1860, covering the counties of Henrico, Richmond, Prince Edward, Albemarle, and Bedford; the second for the period 1755–1790, with Surry County in place of Henrico.

[10] It is worth noting that over 2% of the decedents in the data set had multiple estates, with inventories recorded in different parts of the Will Books of one county (even if the estates were located in different counties). Multiple estates were located by identifying duplicated names in a given county's Will Books after the first pass of locating and recording inventories. Jones's Virginia data do not include any decedents with multiple estates. Her sampling approach to gathering inventories would have been unlikely to identify decedents with multiple estates because such estates were rarely listed together in the Will Books (see *Colonial Wealth, Documents and Methods*, pp. 1813–38, 1844–45, 1852, on Jones's sampling methods).

[11] On this point see Lee Soltow, *Distribution of Wealth and Income in the United States in 1798* (Pittsburgh, 1989), p. 315, n.37, who expresses concern about the possible magnitude of sampling error in Jones's estimates.

II

There are a number of issues that can be important for understanding what probate records can tell us about the wealth of the living. Of primary concern is the fact that probated estates are not representative of the estates of the population of living wealth-holders. There is a probate bias: probated decedents tended to be wealthier than non-probated decedents, if only because those with negligible wealth-holdings were not subject to probate. Also, there is an age bias: life-cycle effects made decedents relatively older and relatively richer than the living. On both counts, a representative cross section of estate inventories tends to overstate wealth levels and to understate inequality at a given time. Studies with a cross-sectional focus seek to correct these selection biases, using demographic evidence in combination with assumptions on the characteristics of potential wealth-holders whose estates were not recorded in the probate records.[12] In this paper I focus on patterns over time in Virginia wealth-holdings, and I do not attempt to correct for the age bias or the probate bias inherent in the data. It seems reasonable to abstract from the issue of age bias, and to expect pronounced trends in wealth-holdings over time to show up among the wealth-holdings of decedents, notwithstanding the fact that they were older than average. The issue of probate bias requires more attention, however.

Table 1 presents summary evidence on the extent to which decedents' estates were probated in the five Virginia counties.[13] I use the number of White males aged 45 or older as a proxy for the pool of potential decedents at census benchmarks. To correct for yearly fluctuations and potential dating errors, I look at the average number of probated decedents in the five years centered on the census year. The "inventory rate" for each county expresses the number of inventories as a proportion of the population of White males age 45 or more. Abstracting from deaths of younger men, we can think of the

[12] For a useful summary statement of the issues see Clayne Pope, "Inequality in the Nineteenth Century," in S. L. Engerman and R. E. Gallman (eds.), *The Cambridge Economic History of the United States*, 3 vols., 2: *The Long Nineteenth Century* (Cambridge, 2000), p. 133, as well as Jones, *Wealth of a Nation to Be*, pp. 44, 347–51. As Jones's work on colonial wealth demonstrates, given the relevant demographic data it is a simple matter to re-weight estate data to correct for age bias. More problematic is correcting for probate bias, which requires answers to a number of questions. For example: What fraction of decedent estates was probated?. What was the average level of wealth of non-probated estates? To estimate the level of Southern wealth in 1774, Jones estimated that the estates of 68% of decedent wealth-holders were probated, and she assumed that non-probate estates averaged one-quarter the wealth of probated estates. The implication is that the average level of decedent wealth was 76% of the average level of probated decedent wealth (given age). To estimate the size distribution of wealth for the living requires further assumptions, as Jones describes.

[13] Table 1 presents evidence for the five counties used to describe the period after the Revolution. Surry County replaces Henrico to describe the period 1755–1790. Looking circa 1790, I estimate Surry County had 136 "older white men" and 6.4 inventories on average per year, for an "inventory rate" of 4.7%, very close to that estimated for Richmond County. See Table 1 for definitions and sources.

TABLE 1. *The Extent of Probate among Likely Decedents*

	1790	1800	1810	1820	1830	1840	1850	1860
Albemarle								
Older white men	418	547	589	605	667	745	931	998
Inventories	6.0	8.8	11.2	17.6	20.8	17.8	18.8	17.0
Inventory rate	1.4%	1.6%	1.9%	2.9%	3.1%	2.4%	2.0%	1.7%
Bedford								
Older white men	466	611	599	680	700	755	1,000	1,096
Inventories	6.0	8.2	9.6	21.2	16.8	17.2	23.0	21.8
Inventory rate	1.3%	1.3%	1.6%	3.1%	2.4%	2.3%	2.3%	2.0%
Prince Edward								
Older white men	222	274	310	317	335	334	316	358
Inventories	6.0	9.0	11.4	12.8	6.8	12.2	9.2	10.3
Inventory rate	2.7%	3.3%	3.7%	4.0%	2.0%	3.7%	2.9%	2.9%
Henrico								
Older white men	342	392	540	639	655	899	1,491	2,486
Inventories	9.0	15.2	12.4	8.8	12.6	9.8	11.2	16.0
Inventory rate	2.6%	3.9%	2.3%	1.4%	1.9%	1.1%	0.8%	0.6%
Richmond								
Older white men	165[a]	161[a]	158	139	163	183	191	231
Inventories	8.0	9.2	6.6	4.8	5.0[b]	7.0	11.0	10.5
Inventory rate	4.9%	5.7%	4.2%	3.5%	3.1%	3.8%	5.8%	4.5%

Notes: Older white men: the number of white men aged 45 or more. For 1800, 1810, 1820, this is the sum of relevant age-groupings in the published census volumes; for the other years it is estimated from numbers in related age categories. Inventories: the average annual number of estates (of men) inventoried by the County Court, including those with incomplete data (e.g., illegible inventories, and those not appraised or partially appraised) which are not used for wealth estimates. I use the 5-year average centered on the census year except for 1860, which is the 5-year average for 1856–60. Inventory Rate: inventories relative to the population of older white men.

[a] The 1790 and 1800 estimates of older white men in Richmond do not use 1800 census data, which appear to be in error. The census reports population for Richmond and Westmoreland Counties together in 1800, but a comparison with adjacent years indicates there was a substantial undercount.

[b] The inventory count for Richmond in 1830 is the average for the years 1827 to1830 and 1833; the years 1831 and 1832 are missing due to a gap in the Will Books.

Source: Virginia Inventories data; see notes.

observed inventory rate as the product of a rate of death and a rate of probate for the decedents. In part, the table's value is to illustrate the challenging nature of probate data, for there are rather substantial variations in the observed inventory rates, both across counties and over time. Those variations reflect an unknown combination of variations in rates of mortality and probate.[14] But supposing that mortality variations show up randomly among the observed inventory rates, there are a couple of noteworthy patterns in the table.

Richmond County stands out with a relatively high inventory rate (see Table 1). Perhaps the county had relatively few propertyless or poor decedents whose estates were too small to warrant probate. Certainly it would not be surprising if propertyless men avoided this long-settled Tidewater county and sought opportunity in frontier areas.[15] On this reading, Richmond's average levels of probated wealth are less subject to probate bias than is the case in the other counties, and comparing probated wealth levels will tend to understate Richmond's relative wealth. This could be an important and troublesome effect to consider for the purposes of cross-sectional estimates of wealth, but it is less important for this study.[16] Changes in inventory rates

[14] Moreover, even if we observed them, differences in probate rates would be difficult to interpret. For example, probate rates would be inversely related to the proportion of decedents with very little wealth, and to transportation costs. Growing population density and transportation improvements both served to lower transportation costs in the nineteenth century, so the tendency for inventory rates to drift downward from 1820 to 1860 may indicate a growth in the proportion of decedents with too little wealth to warrant probate.

[15] The count of tithables gives one indication that the settlement process was complete in Richmond County well before mid century. Between 1724 and 1749 Richmond's tithable population grew just 0.7% per year (from 1,551 to 1,811), compared to 2.7% per year for the colony as a whole; Evarts B. Greene and Virginia D. Harrington, *American Population before the Federal Census of 1790* (Gloucester, MA, 1966 [reprint, originally 1932]), pp. 150–51. Comparisons of the various counties' white population counts in the 1790 Census and the 1755 list of tithables for Virginia also illustrate Richmond's stagnant population, in contrast to the other counties I examine. See Greene and Harrington, pp. 150–51, 154–55.

[16] It is difficult to be precise about the magnitude of the effects of differential probate bias, but with simplifying assumptions we can illustrate the logic. One extreme case arises when nonprobated decedents have zero wealth; then true mean wealth (of decedents) equals probated wealth times the rate of probate. Assuming equal mortality rates across counties, we could correct for relative probate bias by multiplying counties' mean probated wealth by their inventory rates. The correction would not change much if, as Jones assumed, the nonprobate mean was 25% of the probate mean. Random variation of mortality across counties would also change the correction factor, but not by much (e.g., for Richmond in 1790, if the probate rate was 100%, then one more wealth-holder death would raise the inventory rate from 4.85% to 5.45%, or by a factor of 1.12). For her estimates of colonial wealth Jones assumed a constant rate of probate within each region of the country (*Wealth of a Nation to Be*, p. 45). That may not be a problem; for example, the effects of differential probate rates across counties could cancel out in her random sample. More generally, in the face

over time do affect the interpretation of observed trends in probated wealth, but except for Henrico County, they are not a major consideration.

Henrico County stands out for the large decline in the inventory rate in the years from 1800 to 1860, starting at over 4% and falling to below one-sixth of that value (0.6%) by 1860. The decline is particularly noteworthy from 1830 to 1860, when the county's population growth accelerated with the expansion of the city of Richmond.[17] In the late antebellum period, Henrico's very low inventory rate stands out in sharp contrast to those of the other counties. There is no reason to suppose that mortality dropped in this period; rather, it seems clear that a shrinking fraction of decedents entered probate. That in turn was presumably because a shrinking proportion of decedents had enough personal property to require the probate process.[18] The magnitude of the change in Henrico's probate rate was substantial enough to affect the interpretation of trends in probated wealth there. However, Henrico was probably small enough that long-term trends in eastern Virginia as a whole are not substantially affected (see below).

III

Jones's well-known work offers one of the few empirical perspectives available for exploring the reliability of the Virginia inventory data. Jones's sample includes 78 estates from Virginia, drawn from three "clusters" (groups) of counties in the years 1773–1775. None of Jones's estates is from the counties I work with. For comparison, I focus on the estates in my data set from the years 1772–1775 (using the four-year period to increase sample size and reduce sampling error). A summary view of the data is presented in Table 2. The point that jumps out is that Jones's decedents were distinctly wealthier than those from my data set, with average personal estate 42% greater than in my data (386 Virginia pounds as compared to 271). That pattern is evident across all three categories of personal wealth that I measure: capital, slaves, and financial assets (see Table 2). However, the greater average wealth in Jones's sample is in large measure a reflection of a greater extent of slaveholding: 67% of Jones' decedents held slaves, compared to

of variation of probate rates across counties, the number of counties sampled would be an important consideration in sample design for cross-sectional wealth estimates.

[17] The free population of the city of Richmond grew 3.3% per year in the period 1830 to 1860, compared to 2.5% per year in the county of Henrico as a whole, and 1.3% per year in the state as a whole (see Table 1 for sources of population data).

[18] Apparently the rapid urbanization of Henrico saw a swelling of the free propertyless working class, an intriguing development in one of the slave South's largest cities. It is worth noting that there was no shift in the age structure of Henrico's free population to help explain the decline in Henrico's measured inventory rate (e.g., a shift toward younger ages would have resulted in fewer deaths and a lower inventory rate).

TABLE 2. *Two Views of Decedent Wealth-Holdings in Virginia circa 1774*

	Personal Estate	Capital	Slaves	Financial Assets	Number of Slaves (Average)	Estates w/Slaves	Number of Estates
	(Virginia Pounds)						
Jones Sample	386.4	126.9	252.3	7.2	5.6	67%	72
Irwin Sample	271.3	95.8	174.7	0.8	4.4	53%	150
Jones sample							
slaveholders	552.6	163.5	378.3	10.8	8.2	100%	48
nonslaveholders	53.4	53.4	0	0	0	0%	24
Irwin sample							
slaveholders	473.7	141.3	331.7	0.6	8.4	100%	79
nonslaveholders	46.0	45.1	0	0.9	0	0%	71

Notes: Jones's Virginia data include 78 estates but 6 of the decedents were females; I consider male decedents only. "Slaves" includes the very few indentured servants in the inventories (the Jones sample has 1 estate with 4 servants; the Irwin sample 5 estates with 6 servants).

Source: Alice Hanson Jones, "American Colonial Wealth Estimates, 1774" [Computer file], ICPSR Study 7389 (Ann Arbor, 2001), corrected for discrepancies with *American Colonial Wealth, Documents and Methods* (New York, 1978), pp. 1295–1403. The Irwin sample is comprised of the estates from the years 1772 to 1775 in the Virginia Inventory data set.

53% in my data.[19] Controlling for slaveholding status, average levels of wealth are much closer in the two sets of estates. Jones's slaveholders had 17% greater average wealth than those in my sample; her nonslaveholders had 16% greater wealth than mine. Jones's decedents still appear somewhat wealthier, but the differences are small relative to the underlying variation in the data.[20]

If our goal was to document cross-sectional patterns of wealthholding in Virginia on the eve of the American Revolution, then it would be important to explain the differing extents of slaveholding in the two sets of estates. However my interest is in changes over time, so I prefer to sidestep the issue by noting that the two data sets represent different populations.[21] Jones's Virginia estates were collected as part of a sampling strategy designed to produce a representative view of wealthholdings in the South as whole, and not Virginia *per se*. Even if Jones's Virginia estates over-represent Virginia slaveholders, her data could be representative of the South as a whole because there could be offsetting biases in her samples from southern counties outside of Virginia.[22]

A second empirical perspective on the reliability of the Virginia inventory data is afforded by published data from the 1860 census, which includes reports of personal wealthholdings and slaveholdings at the county level. Table 3 reports summary comparative evidence from the inventory data and the 1860 census for the five counties represented in the estate sample.[23] I

[19] Calculations use the data from the ICPSR computer file (see notes to Table 2), with corrections of observed discrepancies between the computer file and the published text of the inventories (accepting the latter as valid). For example, the computer file is missing one of the slaves of the estate of Samuel Johnson of Fairfax County that is listed in Jones' text (1978, p. 1383).

[20] For example, pooling Jones's inventories with mine from the same period, an ordinary least squares regression that controls for slaveholding status yields a point estimate that Jones's decedents had 14.2% more personal wealth than those in my sample, with an estimated standard error of 11.5%.

[21] I suspect that Jones's sample over-represents slaveholders in her sampled counties. In Jones's sample of county cluster 81, 79% (19 of 24) of male decedents held slaves; in county cluster 83, 69% (20 of 29) of male decedents did. Those rates of slave ownership are simply much higher than I found in similarly located counties that also were similar in terms of the proportion of population slave and the average number of slaves per estate.

[22] See Jones, *American Colonial Wealth*, p. 1859, on this point. Jones notes that her "sample design" is not expected to yield estimates representative of the "wealth of the particular colony" in which the sampled counties lay, and that across the southern colonies the "sampled counties complement each other." For example, a lack of "older Virginia coastal counties" is compensated for by the presence of "older coastal counties in Maryland and in South Carolina."

[23] I use the average over the entire decade in order to get large enough sample sizes to look at for each county individually. I express census values relative to an estimate of the number of free families, calculated from the reported free population using an assumption on free family size (see table). In my discussion I ignore possible problems with the census data on wealth; on such problems, see Richard H. Steckel and Carolyn M. Moehling, "Rising Inequality:

TABLE 3. *1860 Census and Probates*

	Personal Property		Slaveholdings		Slaveholding Size	
	Probates (per Estate)	Census (per Family)	Probates (per Estate)	Census (per Family)	Probates (per Estate)	Census (per Holding)
Prince Edward	$11,411	$8,369	84.1%	68.9%	16.3	12.6
Albemarle	$9,837	$6,762	66.0%	54.8%	18.1	10.7
Bedford	$5,373	$4,299	54.1%	40.4%	12.1	9.0
Henrico	$6,876	$3,786	57.7%	30.0%	12.3	8.6
Richmond	$3,102	$2,312	30.6%	31.4%	13.6	9.5

Notes: To get reasonable sample sizes for the individual counties, the probate values are averages for the period 1851–1860. The census reports total free population, I assume an average of 5.33 free persons per family.

Sources: Virginia Inventory data; and calculations from published census data: U.S. Bureau of the Census, *Population of the United States in 1860* (Washington, 1864), for personal property and population; *Agriculture of the United States in 1860* (Washington, 1864), for slaves and slaveholdings.

compare the two sources using three indicators: average level of personal property, rates of slaveholdings, and average size of slaveholdings. Before delving into the details of the data, it is worth noting that the expected bias in the probate data is evident with each of the three indicators. With only one exception, in each of the counties the levels of personal wealth, rates of slaveholding, and slaveholding sizes were greater for the sample decedents than for all free families. The only exception to the general pattern is Richmond County, where the estimated rate of slaveholding from the census is a shade above the rate among the probated decedents.

Although there are many possible ways to read the data, for current purposes the key point is that with the exception of Henrico County, the census data and the inventory data offer very similar pictures of comparative wealth across the counties. Leaving aside Henrico, both sources indicate the same ranking of personal property levels: Prince Edward levels of personal wealth were greatest, with Albemarle a close second; at substantially lower levels of wealth came Bedford and then Richmond County.[24] For Henrico, the probate data overstate the county's relative standing: it had the second lowest level of census wealth per family but the third lowest level of probated wealth. A similar pattern is evident in the data on rates of slaveholding: Henrico aside, the ranking of counties is the same in both sources. Slaveholding was most prevalent in Prince Edward, followed by Albemarle then Bedford then Richmond. According to the census data, Henrico had the fewest slaveholders relative to free population (30 slaveholdings per 100 free families), but in the estate data Henrico had the third highest rate of slaveholding (58% of estates). Finally, the two sources suggest different rankings of counties in terms of average slaveholding size, but the differences strike me as small. Both sources suggest the same grouping: Prince Edward and Albemarle had larger average slaveholding size, Bedford, Henrico and Richmond had smaller average holdings.

The distinctive position of Henrico County in Table 3 is not surprising if we recall that a relatively small proportion of Henrico's decedents were covered by the probate process in 1860 (refer to Table 1). It seems likely that as the free urban population of the city of Richmond swelled, average wealth levels fell, and that decedents with enough property to warrant processing by the probate systems became increasingly unrepresentative of the free population. On this reading, the relatively low "inventory rate" of Henrico serves to explain why the county appears relatively more wealthy in the probate data than in the census data. In my view, it is clear that Henrico

Trends in the Distribution of Wealth in Industrializing New England," *Journal of Economic History*, 61 (2001): 163–64 and references there.

[24] It may be worth noting that across these four counties the ratio of census wealth to probated wealth fell in a fairly narrow range, from 69% (Albemarle) to 80% (Bedford). That is one way of gauging the consistency of the two sources.

was distinctive because it had a substantial poor urban population whose existence is reflected in the census data but not in the probate data.[25] Subject to that caveat, the comparison of census and probate evidence for 1860 does provide some assurance that the Virginia inventory data set captures key patterns of wealthholding in the late antebellum period.[26]

IV

The Virginia Inventories data offer two overlapping views of wealth accumulation in Virginia. The larger part of the data set covers the period from the end of the Revolutionary War until the eve of the Civil War (1783–1860) and is comprised of the surviving inventories from five counties, Albemarle, Bedford, Prince Edward, Richmond, and Henrico. Because the Will Books for Henrico in the decades before 1783 do not survive, Surry County replaces Henrico in the smaller part of the data set, covering the period of 1755–1792. I focus on two dimensions of the evolution of Virginia wealth-holdings for each of the periods under consideration. I start with an overview of wealth accumulation over time to identify patterns in the levels and composition of personal wealth. Then I narrow my focus to the evolution of "capital" holdings over time, with an eye toward implications for the course of economic growth. Capital (personal wealth exclusive of slaves and financial assets) embraces the wide range of household and farm items that people owned in the Old Dominion. I treat the broad patterns of change in capital per estate as an indicator of the broad trends in the capacity of the Virginia economy to provide for the material welfare of its people. Implicitly, I treat the wide array of physical non-human property in the estates as non-human capital used to produce goods and services, whether for market or household use.[27]

The period from 1755 to 1792 is considered first. Table 4 presents an overview of the Virginia inventory data for these years, using five-year averages in order to reduce random variability and reveal key patterns. Two of the half-decades stand out. First, before the American Revolution, the early

[25] Henrico had a relatively large free black population, but that is not why Henrico's census wealth values are so much lower than the probated values. If we assume zero wealth for free blacks and calculate average wealth per free white family, it remains that Henrico has the fourth highest census wealth but third highest probated wealth. Presumably Henrico's urban white population included relatively more families with little or no wealth.

[26] Similar patterns are evident when comparing evidence on slaveholding and slaves in the three counties. In both the census and the probate data, Bedford had fewer slaves and slaveholdings; and Prince Edward appears wealthier than Albemarle in the census data but not in the probates.

[27] Looking at capital holdings offers a broader than usual perspective because conventional measures of economic growth omit most household production. The capital holdings in the Virginia inventories include the wide array of household equipment, furnishings, supplies, and other tangible items that would have been direct inputs into household production.

TABLE 4. *Personal Wealth-Holdings in the Eighteenth Century*

Period	1755–59	1760–64	1765–69	1770–74	1783–87	1788–92
	(Average values, Virginia £)					
Personal estate	248	323	250	254	274	507
Capital	103	98	91	91	93	151
Financial assets	10	9	4	1	4	22
Slaves	136	216	156	162	177	334
Number of estates	132	173	132	158	175	145
with slaves	53%	59%	57%	53%	57%	58%
slaveholding size	8.8	9.2	7.7	7.5	6.5	12.9
slave price	29	40	36	41	48	45

Notes: The years 1775–1782 are excluded in order to avoid dealing with currency depreciation over the course of the American Revolution (e.g., in 1781 the average appraised price per slave was over £13,000 Va., and the average price per slave in individual estates ranged from £49 to £60,000, reflecting inconsistencies across appraisers).

Source: Virginia Inventory data (Albemarle, Bedford, Prince Edward, Richmond, and Surry Counties).

1760s had a very high level of average wealth, almost 325 pounds per estate, compared to about 250 pounds in each of the other colonial half decades. That distinctively high average wealth was almost entirely due to a relatively high level of slave wealth in the period. That in turn reflected relatively high levels of the three factors determining average slave wealth: the proportion of estates that held slaves, the average number of slaves per holding, and the average price of slaves (see Table 4). I expect that the "spike" in slave wealth in the early 1760s will prove to be a reflection of random sampling error, and not a reflection of some distinctive historical episode, but more research is required to pin down the point.[28]

The last set of years in Table 4 (1788–92) also stands out for relatively high levels of wealth, and sampling error is probably not at work. The average level of wealth per estate in this half-decade was roughly twice as large as in the earlier half-decades shown in Table 4. This higher level of wealth was not a temporary peak, as wealth levels stayed up in the years following (see Table 6). Greater slave wealth was part of the story, as average slaveholding size and average slave price were near their peak values for the period shown in the table. However, capital holdings and financial assets also were much greater than in the earlier years. It is clear that the value of personal estates increased sharply in the period after the end of the Revolution.

More research is required to understand the late eighteenth century increase in wealth, but at this stage we can rule out one possible answer – inflation. Available estimates indicate that the average level of prices in the United States as a whole in the years 1788–92 was perhaps 10% above the level in 1770–74.[29] Moreover, the average price of slaves in the estate data was about 10% greater in the later than in the earlier years (see Table 4). Given these two points of evidence, inflation can account for only a small part of the almost doubling of average wealth per estate from 1770–74 to 1782–92. Decedent wealthholders in the early 1790s were distinctly richer than their counterparts in the late colonial period. That result is somewhat surprising in light of prevailing perspectives on U.S. economic growth in the late eighteenth century.

For a long time now, the period of the American Revolution and the Confederation has been seen as one of economic difficulties for the United

[28] Table 4's slave price series is remarkably consistent with data for slaves newly arrived in South Carolina shown in Appendix Table 2 of the Eltis and Richardson essay (Chapter 6) in this volume, though not with the series developed by Mancall, Rosenbloom, and Weiss (both nominal and deflated slave prices) from South Carolina probate records (Peter C. Mancall, Joshua L. Rosenbloom, and Thomas Weiss, "Slave Prices and the South Carolina Economy, 1722–1809," *Journal of Economic History*, 61 [2001]: Table 1).

[29] Based on either the Warren and Pearson wholesale price index (U.S. Bureau of the Census, *Historical Statistics of the U.S.*, Series E52) or the cost of living index of Paul A. David and Peter Solar, "A Bicentenary Contribution to the History of the Cost of Living in America," *Research in Economic History*, 2 (1977): 16–17.

States as a whole, and especially for the South. The consensus view is that per capita output fell sharply during the Revolution and did not recover until sometime in the 1790s.[30] Whether implicitly or explicitly, current views rely on a simple export-led growth model, with a decline in per capita exports pulling down per capita output.[31] Given the relatively larger role of exports in the Southern economy, the implication is that the decline in Southern per capita output would have been particularly pronounced.[32] However, the evidence from the Virginia inventory data indicates that any decline in Southern per capita output in the War and its aftermath was not of a magnitude and duration to affect measured patterns of wealth accumulation.

Table 5 zeroes in on the evidence on capital holdings in eighteenth century Virginia. In addition to the simple arithmetic average of capital holdings in each period, I also present the geometric average and the median capital holding. Looking at all three provides some check on the reliability of the data; any patterns over time will be more compelling if evident in all three measures. On a practical level, the occasional appearance of extremely wealthy decedents has much less effect on the median and the geometric average than

[30] Stanley L. Engerman and Robert E. Gallman describe the consensus view with some skepticism, pointing out theoretical and empirical weaknesses ("U.S. Economic Growth, 1783–1860," *Research in Economic History*, 8 [1983]: 17–19). Recent examples that reflect the consensus view include Robert E. Gallman, "Economic Growth and Structural Change in the Long Nineteenth Century," in Engerman and Gallman (eds.), *The Cambridge Economic History*, 2: 9, 21–22; Peter C. Mancall and Thomas Weiss, "Was Economic Growth Likely in Colonial British North America?" *Journal of Economic History*, 59 (1999): 26–27; Russell R. Menard, "Economic and Social Development of the South," in S. L. Engerman and R. E. Gallman (eds.), *Cambridge Economic History of the United States*, 3 vols., 1: *The Colonial Era* (Cambridge, 1996), pp. 293–94; and John J. McCusker and Russell R. Menard, *The Economy of British America, 1607–1789, with supplementary bibliography* (Chapel Hill, 1991), pp. 369–76. Claudia D. Goldin and Frank D. Lewis also contributed to the consensus view when they indicated that U.S. per capita income declined somewhat from 1774 to 1793 ("The Role of Exports in American Economic Growth during the Napoleonic Wars, 1793–1807," *Explorations in Economic History*, 17 [1980]: 22–23). However, the bulk of their analysis demonstrates that exports played only a minor role in late eighteenth century U.S. economic growth, which is inconsistent with the consensus view.

[31] McCusker and Menard, *The Economy of British America*, p. 376. The consensus relies heavily on James F. Shepherd and Gary M. Walton's finding that U.S. per capita exports were lower in the early 1790s than before the Revolution ("Economic Change after the American Revolution: Pre- and Post-War Comparisons of Maritime Shipping and Trade," *Explorations in Economic History*, 13 [1976]: 397–422). See also Engerman and Gallman, "U.S. Economic Growth," pp. 19–20; implicit criticism of export growth models is in their comment that because exports accounted for less than "ten percent of national income" they were not large enough "to dominate income movements." Goldin and Lewis, "The Role of Exports," p. 18 make a similar point.

[32] Menard, "Economic and Social Development of the South," pp. 293–94; McCusker and Menard, *Economy of British America*, p. 375; Stanley L. Engerman, "A Reconsideration of Southern Economic Growth, 1770–1860," *Agricultural History*, 49 (1975): 348–350.

TABLE 5. *Capital Holdings in the Eighteenth Century*

Years	Geometric Average	Median	Arithmetic Average	Number
		(Appraised values, Virginia £)		
		County set 1		
1755/59	46	51	103	132
1760/64	59	59	98	173
1765/69	56	67	91	132
1770/74	57	61	91	158
1783/87	62	65	93	175
1788/92	84	93	151	145
		County set 2		
1783/87	72	71	137	178
1788/92	86	93	156	159
1793/97	97	102	165	204
1798/02	131	150	255	228

Note: County set 1 is comprised of Albemarle, Bedford, Prince Edward, Richmond, and Surry Counties. In County set 2 Henrico replaces Surry.
Source: Virginia Inventory data.

on the simple arithmetic average.[33] The table uses two different but overlapping sets of wealth data. The first set is the same as in Table 4 and runs from 1755 to 1792. The second set has Henrico County in place of Surry in order to look further past the Revolutionary War; these data cover the period 1783 to 1812.

All three measures of the level of capital holdings provide a similar picture, with two key features. First there is no sign of economic decline across the watershed of the American Revolution, as levels of capital per estate in the 1780s were at (1783–87) or above (1788–92) colonial levels. Second, after the Revolution capital holdings increased fairly steadily from half-decade to half-decade, with only minor variations in the timing and magnitude of the growth depending on which measure is used. At this stage, the Virginia inventory data certainly remind us of the need for more research to document the record of economic growth. But they also point to the possibility that a mercantilist emphasis on trade and exports has misled scholars about the economic consequences of the American Revolution and the adjustments to independence. Perhaps there was a downturn along the lines of a business cycle fluctuation, rather than a persistent shock to economy's productive

[33] More formally, I expect the geometric average to be a more accurate estimator of mean wealth when wealth is distributed log-normally; certainly this was the case in various simple Monte Carlo simulations that I have tried. Wealth distributions often are approximately log-normal; see Soltow, *Distribution of Wealth and Income*, pp. 22–24, 122–23.

capacity. If so, the results in Table 5 are consistent with Engerman's view that "the southern economy had recovered by the early 1780s" and not with accounts that place the nadir of U.S. economic fortunes in the 1790s.[34] It may be that closer attention to fluctuations in the general level of prices will change the picture provided by the Virginia inventories. However at this stage it seems more likely that prevailing views exaggerate the impact of the Revolutionary War and its aftermath on the southern economy.[35]

For the second period – between the Revolutionary War and the Civil War – the patterns of wealth accumulation in Virginia revealed here do not offer any particular challenges to current knowledge. Fogel and Engerman showed that the antebellum Southern economy was neither poor nor slow-growing, except perhaps in comparison to the Northeastern region in the half-century before the Civil War. Consistent with that result, Virginia wealth-holdings grew substantially over the period as a whole, even as the State's relative importance in the Southern and national economy shrank over the period. The first panel of Table 6 presents a summary overview of personal wealth-holdings in the Virginia inventory data in the decades between the Revolutionary War and the Civil War. By the end of the period, wealth levels had risen substantially – by more than a factor of four. That reflected growth in the real value of wealth, not inflation, for the general level of prices was about the same at the beginning and end of the period.[36]

Throughout the period (as in the later Colonial period), slaveholdings constituted the largest category of wealth, hovering around some two-thirds of the personal wealth appraised. The growth of slave wealth reflected a modest increase in the average number of slaves and a sharp increase in the appraised price of slaves. Those increases were partly counteracted by a small decrease in the extent of slave holding among decedents (62% at the

[34] Stanley L. Engerman, "A Reconsideration of Southern Economic Growth," p. 349. The results also provide some support for Merrill Jensen's sanguine view of post-Revolutionary America (*The New Nation, A History of the United States During the Confederation, 1781–1789* [New York, 1950], see e.g. pp. 177–78, 191–92, 246–47, 422–23).

[35] If the trade data are reasonably accurate, then perhaps prevailing views overstate the role of exports in Southern economic performance. However it might be worthwhile to explore whether pre- and post-Revolutionary trade statistics are comparable.

[36] Three different general price level measures are available for the period; each indicates that prices were about the same in the late 1850s as in the late 1780s. Robert A. Margo, *Wages and Labor Markets in the United States, 1820–1860* (Chicago, 2000), Table 3A.8, for the years 1821–1860; David and Solar, "A Bicentenary Contribution," p. 16; and *Historical Statistics*, Series E52 (the Warren and Pearson wholesale price index). See also Gallman, "Economic Growth and Structural Change," p. 7, and "American Economic Growth Before the Civil War: The Testimony of the Capital Stock Estimates" in R. E. Gallman and J. J. Wallis (eds.), *American Economic Growth and Standards of Living Before the Civil War* (Chicago, 1992), p. 88.

TABLE 6. *Personal Wealth-Holdings in the Long Antebellum Period*

Years	1783–90	1791–00	1801–10	1811–20	1821–30	1831–40	1841–50	1851–60
				(Average appraised value, U.S. $)				
Total estate	1,663	1,822	2,589	3,331	2,912	4,312	4,036	7,393
Capital	446	628	843	846	765	963	877	1,306
Financial assets	31	113	69	180	179	429	596	1,370
Slaves (value)	1,186	1,080	1,677	2,306	1,968	2,921	2,562	4,716
Number	265	410	486	652	626	545	651	706
with slaves	62%	65%	63%	65%	70%	68%	60%	58%
slaveholding size	11.5	11.6	13.2	12.8	13	12.8	14.1	14.8
avg. slave price	166	143	201	278	216	336	301	551
Deflated value of				(U.S. $ of 1860)				
Total estate	1,759	1,554	2,001	2,319	3,093	4,155	5,502	7,744
Capital	467	536	651	583	808	942	1,205	1,358
Financial assets	33	97	52	130	200	395	809	1,440
Slaves	1,259	921	1,298	1,605	2,084	2,817	3,488	4,946
Avg. slave price	176	122	156	194	229	324	410	578
Implied price level	94.5	117	129	144	94.2	104	73.4	95.5

Notes: Before 1810 estates were often appraised in Virginia pounds rather than U.S. dollars; these were converted at the rate of $10 per £3, the rate consistently used in the wide variety of estates which included values denominated in both currencies. Deflated values: calculated using Margo's price deflator for the South Atlantic region, which covers the years 1821–1860; for the years 1783–1821 I extrapolated on Margo's series using the Warren and Pearson wholesale price index. The "implied price level" value is the ratio of the average appraised value to the average deflated value in each period.

Sources: Virginia Inventory data (Albemarle, Bedford, Henrico, Prince Edward, Richmond Counties). Margo, *Wages and Labor Markets*, Table 3A.8, for the years 1821–1860; U.S. Bureau of the Census, *Historical Statistics*, Series E52.

start, 58% at the end of the period).[37] The value of financial assets rose the most dramatically across the period, increasing by a factor of 40 from the 1780s to the 1850s. At the start of the period, paper wealth was a distinctly minor category, but by the end it had eclipsed capital holdings in value. In part, that reflected a spread in the rate of ownership of financial assets. Only 6% of estates had paper wealth in the 1780s, some 11 to 13% did in the five decades following. Then the incidence of financial assets increased sharply, to about 25% in the 1840s and 33% in the 1850s. Of course, the growth of the average value of financial holdings was even more pronounced, rising from about $500 in the 1780s to over $4000 in the 1850s.[38]

From decade to decade, the average level of personal wealth generally increased. The 1820s and 1840s stand out as exceptions because, in each, average wealth was less than in the decade before. However those exceptions reflect surges in the general level of prices in the 1810s and 1830s. Deflating appraised values by available price indexes yields a simpler pattern of increasing average wealth over time. The final row of Table 6 shows average wealth expressed in terms of the dollars of the year 1860. Using the deflated values, every decade except the 1790s had greater average wealth than the decade before. The dip in (deflated) wealth in the 1790s reflected a sharp drop in the relative price of slaves which more than offset increases in the deflated values of capital and financial assets. In sum, we can discern a general pattern of increasing personal wealth among Virginia decedents in the eight decades before the Civil War, but details of timing and magnitude vary depending on the treatment of price-level changes.

The general pattern of growing personal wealth reflected diversity in the movements of the different components of wealth, a diversity that belies easy generalizations. The decades of the 1830s and 1850s stand out as all three components of wealth (capital, financial assets, and slaves) hit historically high levels. We could add the decade of the 1800s to the list except that there was a decline in the smallest component, financial assets. The decades of the

[37] Note that the rate of slave holding among decedents reached relatively high levels in the 1820s and 1830s before dropping down to relatively low levels in the 1840s and 1850s (see Table 6).

[38] The incidence and value of financial assets is a feature of wealth-holdings that is rather difficult to determine with accuracy. First, many inventories of bonds etc. were made and recorded separately from inventories of physical property, requiring the researcher to find and match the holdings. Second, based on my experience with the Will Books, it seems clear that for many decedents bonds etc. were not inventoried, but were recorded in accounts related to the settlement of the estate. However in such cases it is often impossible to discern whether a bond payment received was to settle a debt that the decedent was due at the time of his death, or rather payment for a bond accepted as payment for sales of the decedent's physical property. Recalling also that financial assets are gross of debts owed by the decedent (such debts generally do not appear in the inventories), the category is probably the most unreliable in terms of levels of wealth. Nonetheless, the evidence of an increasing value and extent of financial assets is very strong (even if imprecise).

1820s and 1840s stand out because both capital and slave wealth fell pretty sharply from the levels of the decade prior. However, most of those peaks and valleys can be attributed to movements in the general level of prices, rather than movements in the real values of wealth. Looking at deflated measures of the various components of wealth eliminates almost all of the peaks and valleys evident in the nominal appraised values.

The second panel of Table 6 presents deflated values of the summary data on wealthholdings. Deflating by available price indexes, each of the components of wealth-holdings exhibits a general pattern of decade-to-decade increase. Capital values grew steadily from decade to decade with one exception, as deflated capital values in the 1810s averaged 10% less than in the 1800s. The value of financial assets also climbed steadily with one exceptional decade – the 1800s saw nominal and deflated capital values much lower than in the 1790s. Finally, the value of slave holdings also grew decade by decade with one exception; as previously noted, the 1790s featured a sharp drop in the relative price of slaves that pulled down the average value of slave holdings and of personal wealth more generally.

The Virginia inventory data may prove to be of particular interest for the perspective it offers us on the course of U.S. economic growth before the Civil War. As before, I use the evolution of decedents' capital holdings as a potential signal of economic growth and present three summary measures, the simple and geometric averages, and the median value (of capital holdings, see Table 7). Looking at the period of 1783–1860 as a whole, capital per estate clearly grew. Depending on the measure used, capital holdings per estate at the end of the period were some two to three times their value at the start. As previously noted, inflation was not a factor over the period as a whole, so it is clear that the real value of capital per estate grew. Using the arithmetic mean, capital holdings grew at an average annual rate of more then 1.5%; using the geometric mean, the rate was just under 1% per year. By either measure, capital per estate grew enough to suggest that economic growth was occurring in Virginia in the decades between the Revolutionary and Civil Wars.[39]

Looking at the appraised values of capital per estate from decade to decade, what stands out is the essentially flat profile of capital holdings over the first five decades of the nineteenth century. Each of the summary measures

[39] The growth is robust to corrections for the declining rate of probate in Henrico (see Table 1, above). For example, an extreme correction would scale down Henrico wealth in 1860 by a factor of three. That assumes probated estates represented just one-third of Henrico decedents, the other two-thirds being urban poor with zero capital. The implied capital per decedent in Henrico is $541, compared to $1237 in the other counties taken together. Supposing that Henrico County was typical of the 10% of Virginia's free population who were urban in 1860 population, we can average together those two values using a 10% weight for Henrico and a 90% weight for the rest; we get an average capital per decedent $1167 – still double the value of capital per estate circa 1790.

TABLE 7. *Capital Holdings in the Long Antebellum Period*

Years	1783–90	1791–00	1801–10	1811–20	1821–30	1831–40	1841–50	1851–60
Nominal values				(current U.S. $)				
Simple Average	446	628	843	846	765	963	877	1,306
Geometric Avg.	259	336	445	411	375	444	365	502
Median	253	381	492	478	408	478	413	536
Deflated values				(U.S. $ of 1860)				
Simple Average	467	536	651	583	808	942	1,205	1,358
Geometric Avg.	259	284	344	276	395	439	502	528
Median	260	325	373	311	421	472	560	560
Implied price level	94.5	117	129	144	94	104	73.4	95.5

Source: See Table 6.

of capital holdings shows the same basic pattern. Capital holdings increased over the first three decades (1780s, 1790s, 1800s), and then fluctuated irregularly in something of a rough plateau until the 1850s, when capital holdings climbed to peak values. However, a different picture emerges if we control for changes in the general level of prices. Looking at the deflated values of capital holdings, the period from nationhood to the Civil War featured two phases of growth.

The second panel of Table 7 presents the simple average, geometric average, and median values of deflated capital holdings. Each of these measures of the real value of capital holdings shows the same basic pattern. Capital values increased from decade to decade until they dropped sharply in the 1810s, after which they again grew from decade to decade. The apparent timing of nineteenth century growth differs depending on the measure used. The simple average of deflated capital holdings grew fairly steadily across the decades from 1810 to 1860; the geometric average and median values flattened out over the last two decades.

Taking the deflated values of capital per estate as indicators of the physical quantities of capital in different decades, the period as a whole saw growth of capital per estate at an average of 1.1% per year. Supposing that the growth of physical capital per estate can be used to proxy for economic growth, the suggestion is that Virginia experienced a fairly continuous economic growth in the eight decades before the Civil War, with the wartime decade of 1811–20 being the one major setback. Judged in the context of world economic history, such a growth experience is perhaps surprising. It is especially surprising because this was a period of substantial out-migration and presumably it was some of Virginia's most productive people, slave or free, who departed to help build the cotton kingdom.[40]

V

It would be premature to offer definitive conclusions from the rough patterns sketched out above, but it is worth noting some potential implications. Notwithstanding expected biases, the comparative evidence marshaled above gives some confidence that the Virginia inventory data offer a reliable perspective on wealth accumulation in one major Southern state. The results include both corroborations of and challenges to prevailing views of American economic history.

Physical capital holdings were roughly constant in the decades before the Revolution, which tends to corroborate Mancall and Weiss's conjectures that economic growth was not "likely" to have occurred during the colonial

[40] Whether slaves were sold South or migrated with their masters, we would expect the relatively more productive to have departed.

period.[41] However, capital holdings increased quite clearly across the Revolutionary War period, and then increased more sharply through the end of the eighteenth century. These results stand in opposition to the consensus view that the period from the Revolution until the early 1790s was one of economic decline and stagnation for the emerging nation, especially for the South.[42] If wartime inflation and a longer period of disrupted trade caused a downturn in economic activity, it was not severe enough to retard wealth accumulation in Virginia. The growth of physical capital holdings challenges the view that the transition from colony to nation was an economic calamity. However, it does make it easier to understand why slave imports rose to peak levels in the two decades before the 1808 ending of legal U.S. involvement in the Atlantic slave trade.[43]

The Virginia evidence may also offer some insight on one of the key puzzles of American economic history: how the South lost its initial economic advantage over the North. It is apparent that labor productivity and per capita income were greater in the Southern than Northern colonies well into the eighteenth century, given the timing and magnitude of transatlantic migrations to the two regions.[44] But a century later the pattern was clearly

[41] Mancall and Weiss, "Was Economic Growth Likely?" Their estimates of per capita GDP are "conjectural" in the sense introduced by Paul David, "The Growth of Real Product."

[42] The consensus posits a roughly U-shaped course of per capita income from circa 1774 to circa 1800, with various specific time-paths suggested. For example, Thomas Weiss suggested that "the economy suffered a setback during the Revolution and in the years immediately thereafter, but it was apparently quite mild." Weiss has per capita GDP about recovered by 1793, and rising 10% over the period 1774–1800 as a whole ("U.S. Labor Force Estimates and Economic Growth, 1800–1860," in Gallman and Wallis, *American Economic Growth*, p. 32). Mancall and Weiss have per capita GDP falling 1.5% from 1770 to 1800 ("Was Economic Growth Likely?," p. 26), but do not discuss its time path. McCusker and Menard argue for a "severe contraction" between 1774 and 1790, indicating that per capita GDP probably fell by more than 14% between those years (*Economy of British America*, pp. 374–75).

[43] Stanley L. Engerman, "Slavery and Its Consequences for the South in the Nineteenth Century," in Engerman and Gallman (eds.), *Cambridge Economic History*, I: 336–37; Robert W. Fogel and Stanley L. Engerman, *Time on the Cross*, 2 vols., (Boston, 1974), 1: 88.

[44] On this point, see Stanley L. Engerman, "Slavery and Emancipation in Comparative Perspective: A Look at Some Recent Debates," *Journal of Economic History*, 46 (1986): 319–321. For a useful summary view of regional net migration estimates, see Stanley L. Engerman and Kenneth L. Sokoloff, "Factor Endowments, Institutions, and Differential Paths of Growth Among New World Economies: A View from Economic Historians of the United States," in Stephen Haber (ed.), *How Latin America Fell Behind, Essays on the Economic Histories of Brazil and Mexico* (Stanford, 1997), p. 266. The period 1680–1730 saw net migration to the Southern colonies 3.5 times as large as that to the middle Atlantic colonies (by this time there was net out-migration from New England); in the period 1730–1780 the Southern net migration stream was over 2.8 times as large as the middle Atlantic's. Engerman and Sokoloff's summary view is based on the more detailed estimates of David W. Galenson, "The Settlement and Growth of the Colonies: Population, Labor, and Economic Development," in Engerman and Gallman (eds.), *Cambridge Economic History*, 1: 178, 180.

reversed: Engerman's oft-cited estimates of regional per capita incomes in 1840 and 1860 show that the South Atlantic (formerly the colonial South) had only one-half the per capita income of the Northeast (formerly the colonial North).[45]

Some explanation for the reversal of regional economic fortunes was available in the consensus view of economic calamity in the late eighteenth century. After all, if the disruption of export markets in the Revolutionary War and its aftermath was such an economic disaster for the South that it caused an "export-led" decline in per capita income for the nation as a whole, then it could also have caused the South to fall back of the North.[46] Potentially, the North/South income gap of 1840 could be traced directly back to the 1780s or 1790s. However, the Virginia wealth data suggest otherwise. The evidence of growing physical capital in decades following the Revolution suggests that the question of regional reversal is better posed as why the Northeast pulled ahead, rather than why the Southeast fell behind.[47] Looking over the longer period from the 1780s to the Civil War points further to that conclusion. The fairly steady pattern of growing physical capital holdings in Virginia suggests a continuing process of gradual economic growth in the nation's largest slave state until the Civil War. Again, the point that emerges is the likelihood that the emerging urban–industrial economy of the Northeast overtook a growing Southern economy.

For current purposes, the key point is the evidence of a long process of accumulation of physical capital in Virginia in the eight decades leading up to the Civil War. Although that evidence is not a basis for even conjectural estimates of U.S. economic growth before 1840, it is suggestive. The Virginia evidence fits into a picture of a national growth process that was broadly based, both geographically and sectorally (even if the industrializing Northeast experienced exceptionally rapid growth). It also is more consistent with a

[45] Stanley L. Engerman, "The Effects of Slavery on the Southern Economy," *Explorations in Entrepreneurial History*, 4 (1967): 87. Note that the overall North/South gap in 1840 was much smaller; the South's per capita income was two-thirds of the North's. Per capita income in the Midwest (the North Central census region) was just below the South Atlantic's, pulling down the northern average; per capita income in the West South Central region was the highest of any region, pulling up the southern average (the West South Central embracing Louisiana, Arkansas, Texas, and the Oklahoma territory). Engerman's estimates also appear in Robert W. Fogel and Stanley L. Engerman, "The Economics of Slavery," in Fogel and Engerman (eds.), *The Reinterpretation of American Economic History* (New York, 1971), p. 325; and Fogel and Engerman, *Time on the Cross,* 1: 248. They have been often reprinted and widely cited.

[46] McCusker and Menard, *Economy of British America*, p. 374 (on export-led decline). See above (notes 30, 31) for other references to the consensus view.

[47] Indeed, the inventory evidence serves to remind of a point that Engerman raised when teaching economic history: that characterizing the nineteenth century South as poor or stagnant is ahistorical, posing the historically extraordinary cases of England and the Northeastern United States as the norm.

gradual acceleration of economic growth coming out of the colonial period, than with some abrupt "take-off" into economic growth.[48]

The indications of a prolonged period of gradual economic growth in Virginia also have implications for competing perspectives on Southern economic growth in the late antebellum years. Engerman's estimates showed that the South (and each of its regions) was experiencing economic growth in the period 1840 to 1860. Given the longer period of growing physical capital among Virginia decedents, the observed per capita income growth looks more like the continuation of a longer term process, rather than some fortuitous export-led boom.[49] Recalling that the "Cotton Kingdom" rose in this period, as the slave economy expanded south and then west, a continuing process of economic growth in Virginia (largest of the slave states throughout the period) serves to reinforce Engerman's point that slavery was a flexible and adaptable economic institution that was not going to fade away.[50]

Finally, regardless of whether the particular patterns discerned here are borne out by subsequent research, there is one simple point by way of conclusion. The Virginia wealth data remind us that slavery in the United States was a very successful institution from the owners' point of view. That basic point is now perhaps obvious; if so, it is a testimony to the powerful effect of Stanley Engerman's scholarship on our knowledge of the economics of slavery and freedom.

[48] W. W. Rostow, *Stages of Economic Growth* (Cambridge, 1960).

[49] For an emphasis on the role of favorable export demand conditions in Southern growth in the late antebellum period see Gavin Wright, *Political Economy of the Cotton South* (New York, 1978), pp. 89–106; or Elizabeth Fox-Genovese and Eugene D. Genovese, *Fruits of Merchant Capital* (New York, 1983), pp. 42–49.

[50] See for example, "Slavery and Emancipation in Comparative Perspective," p. 329.