

# **The Civil War Revisited: Freedom Won, Economic Leadership Lost, Inequality Maintained<sup>1</sup>**

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[**Alert!** This August 10 deadline version of our EHA 2016 paper excludes an Appendix with state and region earnings, property income, and total income per capita. The revised text will exploit those data, and will be made available to discussants and other session participants prior to the meetings.]

## **In What Sense a Watershed?**

Did the Civil War cause a slow-down in American growth? If so, was it caused entirely by Southern war damage, lost accumulation there as guns were made from ploughshares, and a diminished labor supply due to slave emancipation? Or was there a slow-down up North as well? These are very old questions, raised famously by Charles and Mary Beard and then elaborated by Louis Hacker.<sup>2</sup> The Beards were more interested in the extent to which the Civil War was an institutional and political watershed which shifted political power in to the hands of pro-growth Northern capitalist interests, but Hacker thought that the Civil War also induced a speed-up in manufacturing growth.<sup>3</sup> Economic historians in the 1960s and 1970s challenged Hacker's Northern speed-up thesis.<sup>4</sup> Indeed, Robert Gallman's estimates of commodity output documented a slow-down.<sup>5</sup> One of the present authors summarized what Gallman's findings implied:

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<sup>1</sup> This paper is a revision and extension of Chapter 6 in our recent book Lindert and Williamson (2016).

<sup>2</sup> C. and M. Beard (1927), Hacker (1940).

<sup>3</sup> Hacker (1940: 252, 437-8).

<sup>4</sup> Cochran (1961), Gilchrist and Lewis (1965), Engerman (1966), Williamson (1974).

<sup>5</sup> Gallman (1960, 1966).

“From 1860 to 1870, commodity output growth reached its lowest point anywhere in the nineteenth century, two percent per annum. The same is true of manufacturing value added ... The annual rate of growth of per capita commodity output in the victorious North was only one percent during the war decade.”<sup>6</sup>

Using quite different evidence from that used by those writing in the 1960s and 1970s, this paper confirms the slowdown thesis, but more importantly it documents an *absolute decline* in per capita income in real terms. Furthermore, the decline was big enough so as to eliminate the big United States pre-Civil War income per capita lead over Great Britain. That is, while average incomes (in real purchasing power) were much higher in the United States than in Britain in 1860,<sup>7</sup> they were no longer higher in 1870. Thus, the United States had to regain lost leadership for the second time in its history, having previously done the same after the Revolutionary War and the dysfunctional attempt at a confederation.<sup>8</sup>

We all understand that emancipation was a powerful redistributive force in the South. But just how big was it? If southern inequality fell, how much of that fall was due to emancipation -- property incomes at the top slashed while black incomes at the bottom soared -- and how much of it was due to destructive wartime forces like those that were so powerful during the Revolutionary War years? And which southern states suffered most? How much of the emancipated slave's income gains was due to their ability to retain all the income from their labor, and how much to their now-greater ability to move to higher wage occupations and higher wage locations? And how much of that was offset by a reduction in their labor supply? How big were the emancipation gains for black Americans compared with their Great Migration to higher-wage northern cities from World War 1 to the 1960s? And how big compared with the impact of the Civil Rights movement since?

And what happened to inequality up North? Did it continue its upward march recorded from 1800 to 1860?<sup>9</sup> The traditional literature certainly thought so. Hacker and

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<sup>6</sup> Williamson (1974: 637).

<sup>7</sup> Lindert and Williamson 2016: Chapter 5.

<sup>8</sup> Lindert and Williamson (2013).

<sup>9</sup> Lindert and Williamson (2016: Chapter 5).

Wesley C. Mitchell thought that the war inflation across the 1860s eroded real wages.<sup>10</sup> Although Mitchell had no evidence documenting any rise in returns on financial assets or land rents, he thought he could document a rise in the share going to the residual claimant - profits. Apart from real wages, Hacker and Mitchell did not have any income distribution information to test their rising-inequality thesis. True, Hacker's thesis would have been helped by Rufus Tucker's assessment of the 1863-1870 tax returns but not by the subsequent work by Anna Schwartz, who could not document any significant increase in constant price corporate profits 1864-1871.<sup>11</sup> Until the estimates which appear later in this paper, no useful income distribution evidence had been added to the mix.<sup>12</sup>

### **American Incomes in 1870**

Like the 1860 census, the 1870 census recorded individuals' occupations, wealth, and other attributes in greater detail than earlier, and the recent Integrated Public Use Microdata Samples (IPUMS) offers thousands of such individual records for each census region. Source materials on wages, white-collar earnings, farm economics, and earnings by race<sup>13</sup> are also expanded. Elsewhere, we report how we have fashioned this information into our 1870 income estimates.<sup>14</sup>

Our aggregate (gross) income estimate for 1870 is 9,057 million in current dollars (Table 1), in war-inflated prices 72.6 percent higher than 1860 (5,246 million in current dollars: Table 2). Before we explore the implications of the income estimates, we need to report that our 1870 nominal income estimate is well above the best GDP estimate in the *Historical Statistics of the*

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<sup>10</sup> Mitchell (1903), Kessel and Alchian (1959).

<sup>11</sup> Tucker (1938), Schwartz (1960).

<sup>12</sup> There is, however, added information on the distribution of total estate wealth held by adult males (Soltow 1975: 99-103).

<sup>13</sup> The 1870 census reported black versus white respondents, while the 1860 census reported slave versus free.

<sup>14</sup> Lindert and Williamson (2016: Chapter 5).

*United States*.<sup>15</sup> The large gap between us may be explained by flawed price deflators or by their under-reporting the service sector. Others build up their estimates from the real output side, using production indices to project forwards and backwards from some constant price base year. For comparisons, either our (LW) estimates need to be deflated to put them in 1840 prices (as we do in Table 3) or the other estimates need to be inflated to put them in current prices. For the inflationary Civil War decade, the price deflators matter a great deal (for both the federal North and the confederate South) in any search for a reconciliation of our direct income estimates with that of others, as well as the growth of real GDP they imply.<sup>16</sup>

What are the first-order messages coming from these new income estimates? We start with Frederick Jackson Turner, who – by exploiting population density -- argued that the frontier had stopped moving westward with the 1890 census.<sup>17</sup> One could also argue that the share of United States incomes generated west of the Appalachians had stabilized two decades sooner. In 1870, the income share of the original thirteen colonies (New England, Mid Atlantic, and South Atlantic) was 51.2 percent (Table 1), down only trivially from 52 percent in 1860 (Table 2). Thus, the intensive development east of the Appalachians finally matched the extensive development west of the Appalachians. One might also conclude from Tables 1 and 2 that human capital must have accumulated faster than conventional capital across the Civil War decade given that the gross property income share in gross national income fell from 22 percent in 1860 to 16.6 percent in 1870<sup>18</sup>, without any fall in nominal rates of return. What was true of the United States as a whole, however, was driven mainly by events in the South, where the property share fell from about 33 percent in 1860 to 11.1 percent in 1870. This huge fall in the property share, and the corresponding rise in the labor share, was not due to some spectacular human capital accumulation down South, but rather to a spectacular collapse in Southern property, and thus in property incomes, due to slave emancipation and to wartime destruction. Southern property incomes (in millions of current \$) fell from 534.8 in 1860 to 209.3 in 1870. The Beards used this language to describe it:

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<sup>15</sup> Carter *et al.* (2006: Series Ca10).

<sup>16</sup> Of course, our higher 1870 income estimates understate the already-large lost world income per capita leadership experience across the 1860s.

<sup>17</sup> Turner (1921).

<sup>18</sup> Lindert and Williamson 2016: Tables 5-1 and 5-2.

“a complete destruction of ... [assets] in possession of slave owners without compensation – [was] the most stupendous act of sequestration in the history of Anglo-Saxon jurisprudence.”Lindert and Williamson @016: Tables 5-1 and 5-2.<sup>19</sup>

We will have more to say about the income redistribution down South in what follows below. In the North, the property share drifted upwards very modestly from about 18.0 to 18.3 percent of total income.

### **The Cost of War: Economic Decline and Lost World Leadership**

The Civil War caused by far the greatest wartime loss of life in the country’s history.<sup>20</sup> Including the effects of the net immigration short fall and a decline in births, the annual rate of population growth declined from 3.1 per cent before the war to 2.4 percent across the 1860s. It also caused per capita incomes to drop due to adult male losses.

Since the war was mainly fought on Southern soil, the capital losses were, of course, concentrated on the Southern white population. The South’s income loss on a per capita basis was severe even when we include the income of the emancipated black population, as illustrated by the 1860-1870 plunge in the South Atlantic income per capita in (Table 3 and Figure 1). The results for the defeated South are stunning: income per capita fell by 29 percent in the South Atlantic, by 22 percent in East South Central, and by 28 percent in the

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<sup>19</sup> C. and M. Beard (1927: Volume II, 100).

<sup>20</sup> Engerman (1966: 193-4, fn. 17) reports an estimate that 4 percent of the 1865 population was lost during the Civil War, 635,000 due to war deaths. In addition, there was a short fall of immigration and births. The immigration shortfall has been estimated at 500,000 for the 1860s, and the white birth shortfall at 700,000 from 1860-1872 (Coale and Zelnick 1963: 25). The adult male losses induced a decline in Northern and Southern labor participation rates, thus serving to put downward pressure on per capita income in both regions.

West South Central. The income per capita losses in the South had four sources: a fall in capital-per capita as the war reduced accumulation rates, a force shared by the North ; a fall in white earnings per capita due to adult male losses and diminished labor participation rates, another force shared by the North; a fall due to destroyed capital, a force not shared by the North; and a reduction in black labor supply in response to emancipation, another force not shared by the North.

The economic cost of the Civil War to the South is very close to the total American economic losses associated with the Revolutionary War and early federalist struggles. Since the incomes of emancipated blacks rose, the decline in southern white incomes must have been even bigger, as we shall confirm below.

The victorious North, however, did not prosper during the decade. In contrast with the great gains in per capita incomes up North between 1800 and 1860, Table 3 can barely report any progress at all across the decade. The North only managed a 4.4 percent total increase in real per capita income over the decade, and even the West, having reached diminishing returns on its mineral super-rents, underwent a 23.5 percent per capita income decline.

As a result, the purchasing power of the average American's income dropped enough (6 percent) to lose the lead over Great Britain by 1870. True, most of that is explained by the devastating losses in the South. But still, income per capita barely increased at all in the industrial North. Meanwhile, America's West European competitors did not stand still, but grew at a fast clip. The income per capita growth rate for seven West European countries (Table 3, Panel C) was 1.33 percent, close to America's modern economic growth performance between 1800 and 1860. Great Britain was the leader of the pack, achieving an impressive growth rate of 2.59 percent per annum in its income per capita. Once again American per capita income leadership proved vulnerable, as the Revolutionary War and early federalist years revealed. While American per capita income in 1860 was 17 percent higher than Britain in sterling, and 46 percent higher in the ability to buy a poor man's consumption bundle, it was no higher than Britain in 1870 (8 percent higher in sterling, and 2 percent lower in purchasing power). Leadership was only regained at the start of the twentieth century, and it was subsequently reinforced by Europe's damage and America's prosperity during World War I. During World War II, American

incomes surged far above those of almost all countries, replicating the World War I years. Like the other three major wars, the Civil War had an immense impact on American incomes, the direction depending on whether they were fought at home or abroad.

The Civil War debates ignited by the Beards and Hacker stressed the performance of industry. While our social tables do not easily speak to that issue, other data have accumulated since the Beard-Hacker thesis was challenged in the 1960s and 1970s. To begin with, Hacker relied on manufacturing census information in *current prices*,<sup>21</sup> not a very good idea for assessing an inflationary decade, as Wesley Mitchell pointed out long before Hacker.<sup>22</sup> The Frickey index of manufactured durables fell during the war years,<sup>23</sup> but non-durables did not: the net result was “a much slower rise [in manufacturing output] from 1861 to 1865 than from 1866 to 1870”.<sup>24</sup> And according to Robert Gallman,<sup>25</sup> manufacturing output as share of total commodity output fell over the 1860s. To clinch the manufacturing-did-not-speed-up case, we now have Joseph Davis’s new U. S. industrial production index, which documents a growth rate of 5.3 percent per annum between 1800 and 1860, falling to 4 percent across the 1860s.<sup>26</sup>

Why would we expect this slowdown in the North? There are at least three reasons, and they were all stressed in the literature of the 1960s and 1970s. They are also strikingly similar to the forces responsible for the economic disaster between 1774 and 1790. First, all of those young adult males in the armies (and disabled or dead after the peace) meant a reduction in the size of the effective labor force per capita and downward pressure on output per capita, a downward pressure unlikely to have been offset by more rapid productivity growth and capital accumulation, but rather the opposite. Second, labor productivity should have felt downward pressure as more women and older adult males had to take up some of the slack on farms and factories harmed by the departure of young

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<sup>21</sup> Hacker (1940: Appendix A, 437-8).

<sup>22</sup> Mitchell (1903).

<sup>23</sup> Frickey (1947: 64).

<sup>24</sup> Williamson (1974: 638).

<sup>25</sup> Gallman (1960, 1966).

<sup>26</sup> Davis (2004: Table III, 1189).

adult males to battle. And labor productivity did fall: “the sharp decline in value-added per worker in manufacturing from 1860 to 1870, 13 percent, is a unique occurrence for the nineteenth century”.<sup>27</sup> And real labor earnings per capita fell by x percent in the North, while white real earnings per capita fell by x percent in the South. Finally, the “North could hardly have achieved significant rates of capital accumulation, ‘burdened’ as [it] was with war financing”.<sup>28</sup> All of these forces applied to the South as well, although there were two more that crippled the Southern economy. First, the slave labor force was reduced by the occupying northern armies freeing them, and by their escape to free states. This source of slowdown would, of course, become permanent with the fall of the Confederacy. Second, the northern blockade caused cotton exports to collapse. But while this force was big, it was only temporary since southern cotton exports recovered during the late 1860s.

### **Civil War Costs and Southern White Incomes**

How much did the Civil War cost southern whites?<sup>29</sup> Table 4 offers an assessment for each of the three southern regions, broken down into labor income, property income, and farm profits. We have already seen that real per capita income fell by 26.3 percent between 1860 and 1870 in the South as a whole (Table 3). But since the incomes of emancipated blacks must have risen, southern whites must have undergone an even bigger fall in their average incomes. Indeed, they did. In constant 1840 dollars, Southern white incomes fell on average by 30.5 percent (Table 4), with all three Southern regions experiencing similar drops. These are huge costs borne by the losers, but they must have fallen mainly on slaveholders and landowners, since property incomes absorbed most of those costs. In current prices, property incomes in the South fell by about 61 percent (Tables 1 and 2). Property income from both realty (affecting land owners) and personalty

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<sup>27</sup> Engerman (1966: 179).

<sup>28</sup> Williamson (1974: 648).

<sup>29</sup> A recent paper by Brandon Dupont and Joshua Rosenbloom (2016) raises a different issue, namely: Did the Civil War increase turnover in the elite southern ranks? Apparently, it did.

(affecting slave owners) fell in current prices, the former by 28.2 percent and the latter by a huge 77.3 percent.

Perhaps the best summary of the cost of the Civil War to the losers is this. For the South as a whole, total income in 1840 prices fell by 13 percent, but labor incomes (free and slave in 1860) rose by 6.6 percent. Property incomes, however, fell by an enormous 72.9 percent (Tables 1 and 2). As another indicator, 59 percent of the top 1 percent of the wealthiest American men in 1860 had been Southerners, whereas the southern share was only 18 percent in 1870.<sup>30</sup> But it was not only their wealth that they lost. Legislation increased the power of black tenants and farm laborers, suppressing returns for landowners. If they survived the war, the less propertied in the Confederate ranks didn't pay much for the loss. Rather, their Confederate officers in front of them – “the flower of the South” from elite families – lost almost everything, including many of their lives.

Finally, while inequality fell in the South, the economic gap between it and the North rose dramatically. In pre-war 1860, average per capita incomes in the South were 15.9 percent below those of the North, while the post-war 1870 income per capita gap was 37.8 percent. Thus, the North-South gap more than doubled. Interestingly, the rise in the North-South income per capita gap across the Civil War decade was almost the same as the change in the gap during the 1774-1800 era, namely 20.8 points.<sup>31</sup> It appears that relative to the North, the South suffered equal amounts during the two conflicts.

### **Inequality in the North and Economy-Wide**

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<sup>30</sup> Gallman and Soltow (1976).

<sup>31</sup> Lindert and Williamson 2016: Table 4-4. The 1774-1800 change is calculated using 1860 and 1870 population weights applied to the “original 13” New England and the Middle Atlantic per capita incomes to get the North versus the South Atlantic per capita income gap. Between 1774 and 1800, we are measuring a loss in the southern per capita income lead over the North, while between 1860 and 1870 we are measuring an increase in the northern lead.

The Civil War decade brought a reduction in income inequality among Southerners, even among white Southerners, as we have just seen. By contrast, and consistent with the rising-inequality thesis championed by the Beards and Hacker, income gaps continued their steep climb upwards in the North. Table 4 offers the 1870 evidence to be compared with the 1860 evidence in Table 5, revealing steep rises in inequality in each northern region. Gini coefficients rose in New England from 0.457 to 0.519, in the Mid Atlantic from 0.488 to 0.519, in the East North Central from 0.399 to 0.466, and in the West North Central from 0.419 to 0.478. These are very big increases for just ten years, bigger than the average increases per decade between 1800 and 1860. For example, while the top 10 percent share rose by 1-4 points in the four northern census regions between 1850<sup>32</sup> and 1860 (Table 5), it rose by 5-10 points across the war decade. On the relative rise of wealthy Northerners, the Beards and Hacker were right. Furthermore, this rise in inequality took place even though the federal government imposed taxes on high incomes, on dividends, and on interest income. It also imposed business and inheritance taxes. These taxes on profits, property incomes, and the rich were, of course, used to help finance the war, and they disappeared by 1870. But one would have thought that they would have created a disincentive to accumulate in the 1860s, and thus that property shares and inequality up North would have been even higher in 1870 without them.

However, the widening advantage of the top income groups in the North was eclipsed by the blow to wealthy Southerners, and thus to inequality in the US as a whole, which rose hardly at all: the US Gini stayed the same at 0.511, and the top 10 percent share increased only from 38.0 to 39.3 percent (Tables 4 and 5). It appears that the Northern income widening plus the additional increase in the North-South income per capita gap were just enough to offset the huge equalization of incomes in the South.<sup>33</sup>

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<sup>32</sup> Lindert and Williamson 2016: Table 5-5.

<sup>33</sup> Our results for the changes in inequality between 1860 and 1870 are not radically different from those presented by Lee Soltow (1975: pp. 99-103) on the basis of his spin sample from the censuses, as we have mentioned above. It is difficult, however, to compare our apples with his oranges. We are measuring income among households, whereas he was measuring “total estate” wealth among adult males.

Since so much of the leveling in the South was due to the disappearance of property income accruing to those at the top, it would not be surprising if earnings inequality rose more steeply than income inequality in the US as a whole. And rise it did, very steeply. The Gini coefficient for labor earnings rose from 0.454 in 1860 (Table 6) to 0.546 in 1870 (Table 8). Furthermore, all the components of rising earnings inequality that can be identified for 1800-1860<sup>34</sup> were still at work within the North during the Civil War decade. First, wage-rate gaps widened, between regions and between occupations. Southern wage rates fell sharply relative to those in the North: between 1860 and 1870, the South Atlantic common labor wage fell from 0.81 to 0.55 relative to the North, and it fell in the South Central from 1.03 to 0.69.<sup>35</sup> Within the Northeast, urban-rural wage gaps widened from 1.29 to 1.46 (male common labor), while the urbanization rate soared from 35.7 to 44.3 percent. Thus, wage data suggest that the Kuznets urban forces were adding to inequality in the North. The earlier literature's comments on "a limited supply of skilled labor" during the Civil War decade<sup>36</sup> are certainly consistent with the continued rise in the skilled wage premium and the white-collar premium shown by our data.

The impressions just given from wage rate data are reinforced by the movements in the distribution of overall labor earnings.<sup>37</sup> The earnings premium captured by the higher-skilled, such as the top ten percent of earners, was slightly higher in 1870 than in 1860, and higher in the Northeast than in the North Central region. The main geographic change is that the earnings premia of the higher paid converged across regions. That is, the North Central and East South Central, relative to other regions, were no longer as compressed in their earnings distributions as they were in 1860.

Overall, it appears that the forces driving inequality among whites, both within the North and nationwide, were even stronger in the Civil War decade than over the six decades between 1800 and 1860. Without the powerful Southern redistribution effects of the Civil War and emancipation, American inequality would have continued its upward march started early in the nineteenth century.

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<sup>34</sup> Lindert and Williamson 2016: Chapter 5.

<sup>35</sup> Margo (2002: Table 1, Panel B, 34).

<sup>36</sup> Williamson (1974: 647).

<sup>37</sup> Again compare the 1870 results of Table 5 with the 1860 results of Table 7.

## Civil War Benefits: Emancipation

The ambivalent economic status of the freed slaves has been aptly summarized by the phrase *One Kind of Freedom*, the famous book title by Roger Ransom and Richard Sutch. In terms of their income prospects, some changes in the post-bellum era should have given them strong income gains and others would have reduced them.

On the positive side, freed slaves could now receive something like 100 percent of the product of their labor, instead of the 50 percent that seems to have prevailed in the 1850s. True, as free farmers they had to share the value of what was produced with the landowner – a sharecropper typically got 50 percent. Yet it was now 50 percent of the value of total output, not just 50 percent of labor’s marginal product. Had this been the only change in their fortunes, their incomes would have jumped up even more from their meager rations under slavery than it did.<sup>38</sup>

On the negative side, black incomes were held back by the depression that pervaded the entire post-war Southern economy. For three quarters of a century the United States contained its own less developed country, and black Americans had the misfortune of being trapped in it until World War I and especially II.

Black incomes were also reduced to the extent that emancipated slaves now exercised their right to drop out of the labor force, as did many children, elderly, and sickly. Naturally, freed blacks worked less than slaves. As Ransom and Sutch have emphasized:

“the reduction in the black labor supply did not go unnoticed. Throughout the South there were frequent complaints from planters of a ‘labor shortage’.

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<sup>38</sup> Three other changes would have raised the incomes of newly freed slaves a great deal more, but they were very slow to arrive. First, they should have been free to get a rudimentary education, yet the schooling gains from the Reconstruction era were checked in later Jim Crow decades. So too was their freedom to migrate to higher-paying sectors and regions. And finally, the freedom to accumulate wealth could do little to raise income for several decades, starting, as they did, from zero wealth.

Most contemporaries estimated that the decline was even greater than our own conjecture ...".<sup>39</sup>

Ransom and Sutch conjectured the following ranges of annual workdays by age-sex group in the rural South (figures in parentheses are mid-point averages):

Males 16+	242-276 (259)
Females, 16+	235-258 (247)
Children, 10-15	199-210 (205)

These rural Southern rates are below the rates we have assumed for free-family members in all regions, namely 280 days for households with the head employed in construction trades, rural unskilled workers, and farm-operators; and 222 days for households headed by free urban unskilled laborers and zero-wealth household heads of unknown occupation. We have assumed that adult slaves worked 313 days per year. These figures imply that emancipated male slaves withdrew 17.3 percent of their labor from the market, and females 21.1 percent, for an average of 19.2 percent.<sup>40</sup>

Since Ransom and Sutch published *One Kind of Freedom*, the IPUMS census samples from 1850 onwards have developed a systematic way of coding whether or not each free individual was in the labor force. We have used the IPUMS labor force numbers to document the striking changes in labor force participation between 1860 and 1870. Table 9 unveils our up-dated estimates, comparing the work rate of the emancipated nonwhite population with the work rates of whites and with those nonwhites who were already free in 1860.

The results speak more loudly about the effects of slavery and poverty than they do about any inherent racial propensities for work. Fully 61.5 percent of all slaves were in the labor force in 1860, consistent with our assumption that the slave labor force tended to

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<sup>39</sup> Ransom and Sutch (1977: 46).

<sup>40</sup> The total withdrawal of black labor is bigger when children and the elderly are included.

equal the slave population over the age of 10.<sup>41</sup> When emancipated, freed slaves stayed in the labor force much more like other free persons. The share of nonwhites at work fell from 61.5 percent under slavery, to 46.3 percent in the South and 52.0 percent in the non-South, averaging 46.9 percent for non-whites nation-wide in 1870. This implies a reduction in the labor participation rate of 15.2 percentage points. However, blacks still worked more than did whites in 1870 -- 31.8 percent of the white population worked, a bit lower in the South and higher elsewhere. That free blacks continued to work more than free whites was probably due to their being poorer.

How did these positive and negative influences on black incomes balance out? Processing the 1870 data has not been easy, either for previous scholars or for us. Race-specific incomes have proven exceedingly hard to document for any time before 1940, though others have worked the archives diligently to harvest good clues. To make comprehensive estimates for ex-slaves, we need information on their wealth, their occupations, their wage or salary earnings, and their farm operator incomes, all by region. Fortunately, information on wealth and occupation are available in the 1870 census. Wealth in 1870 was essentially zero for most black households and very low for the rest. We know their occupations in each census, and others have rightly used the occupational mix as the single best indicator of black income disadvantage between emancipation and 1940.

One factor that should have contributed to black income gains by 1870 was the fact that they got paid nearly what whites got paid within the same (low-paying) occupations. A few years ago, Robert Margo surveyed this literature, all of which seems to support the earlier view of only modest racial discrimination in wage rates for farm hands around 1870.<sup>42</sup> Margo reports a black-white wage ratio of 0.97 based on the 1880 Ransom and

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<sup>41</sup> This does not assume that the labor force participation rate was 100 percent for those over age 10, and zero for those younger. Rather it assumes that the number of slaves over the age of 10 who were not working, due to ill health or any other reason, was offset by the number younger than ten years who did work.

<sup>42</sup> Margo (2002: 16-18). See, for example, Higgs (1972, 1975) and Wright (1986).

Sutch sample for both the South Atlantic and South Central.<sup>43</sup> He also believes the same was true for common labor, but notes that the ratio may have been somewhat lower for skilled labor (as conjectured by Higgs). These Southern black-white wage ratios are pretty much what we have assumed for 1870. In the 184 farms in the Ransom-Sutch (2001) sample that hired both black and white farm hands, the former were paid 96 percent of what the latter got. In 1875, black teachers got paid 93 percent of the white teacher pay in the South.<sup>44</sup> Other testimony also seems to fall into this 93-96 percent range for given occupations, both skilled and menial. We have applied these percentages to the all-races wage and salary rates reported by Stanley Lebergott, the *Almanacs*, and our other sources, thus to estimate just how much less a black worker received, and how much more a white worker received, relative to the all-race average for each occupation.<sup>45</sup>

Our information requirements are more challenging for black farm operators, most of whom were southern tenants. The 1870 agricultural census is not adequate to allow our use of Lee Craig's technique for estimating 1860 own-labor income for the South, inclusive of farm profits, by place and race.<sup>46</sup> The best resource available for estimating southern farm operator incomes is the expanded Ransom-Sutch sample of southern farms in 1879-1880. Invoking some assumptions, we were able to use that sample to estimate relationships of farm operator incomes by race to the local farm wage rates, relationships that we then applied to farm operators in the IPUMS sample for 1870.<sup>47</sup>

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<sup>43</sup> Margo (2002: Table 4).

<sup>44</sup> Smith (1984: 690). He also reports parity for teacher pay rates in 1880, and then much lower black rates in the Jim Crow depths of the 1890s. However, for 1890 Margo (1990: 26) finds an average ratio of 95 percent.

<sup>45</sup> More generally, see our review of the evidence on black/white wage ratios in Lindert and Williamson (2016: Appendix F). Our calculations of these implicit black and white rates had to allow, of course, for the employment shares of blacks and whites in each occupation-sex-place group.

<sup>46</sup> Craig (1991).

<sup>47</sup> The complex estimation procedure, and its vulnerability to error, is described in Lindert and Williamson (2016: Appendix G).

For Southern blacks as a whole, our results in Table 9 suggest big real income gains from emancipation, in addition to the value of leisure time and the immense human value of freedom itself. Their real income gains might have been something like 30 percent, despite the 22-percent decline in their rates of labor force participation. As we have noted, emancipation meant that that free blacks captured something much closer to their marginal product rather than the 50 percent that slavery had let them consume in 1860. And given the decline in Southern white incomes, the ratio of black to white income per capita in the South roughly doubled from 1860 to 1870 (from 0.228 to 0.435: Table 10). In the North, free nonwhites continued to have about half the average incomes of whites, as they had before the Civil War.

So, how does the emancipation episode fit in with the full history of black incomes from colonial times to the present? Figure 2 supplies our estimates. The black/white labor earnings ratio had fallen to one third by the end of the ante bellum period, and then it rose to about 40 percent in 1875. It then rose hardly at all during the Jim Crow and interwar years. The big increase in the black/white earnings ratio took place during the Great Black Migration and the Civil Rights Movement where the impact on the ratio was even bigger than that due to Emancipation.

### **The Civil War Decade Trade-Off**

The Civil War decade, like the Revolutionary War before it, had huge and conflicting impacts. Most obviously, people perished -- more Americans died in the Civil War than in all of America's other wars put together. Our new income estimates make other major impacts come in to sharper focus. First, the Civil War and Emancipation produced America's greatest redistribution of wealth and income, taking much more from Southern whites than did the Revolutionary seizure of Loyalist assets. Second, the great rise in inequality from 1800 to 1860 continued (or even accelerated) in the North during the Civil War decade. Third, the Civil War cost America enough income to erase its purchasing-power per capita income advantage over Britain. The loss in average US income may not have matched the Revolutionary War loss in percentage terms, but it was large enough to allow Britain to resume the lead. Fourth, this decade completed the South's two-century

reversal of fortune. That reversal accelerated during the Civil War decade as it had during the Revolutionary War and early federalist years, and finished converting the nation's richest region into its poorest. Finally, both upheavals delivered a new kind of freedom. The Revolutionary War gave white Americans their freedom from Britain, and the Civil War and Emancipation gave African-Americans the freedom they had been denied by the Founding Fathers. The two conflicts differed in the net benefits delivered to the victors. The Revolutionary War brought a significant economic loss to those gaining their freedom. The Civil War, by contrast, raised incomes of those gaining their freedom by about 30 percent.

### References

- Beard, Charles and Mary Beard. 1927. *The Rise of American Civilization*. New York: Macmillan.
- Carter, Susan *et al.* (eds.). 2006. *The Historical Statistics of the United States: Millennial Edition*. Five volumes. New York: Cambridge University Press.
- Coale, Ansley and Edgar Hoover. 1958. *Population Growth and Economic Development in Low-Income Countries*. Princeton: Princeton University Press.
- Cochran, Thomas C. 1961. "Did the Civil War Retard Industrialization?" *Mississippi Valley Historical Review* 48 (September): 197-210.
- Hacker, Louis. 1940. *The Triumph of American Capitalism*. New York: Columbia University Press.
- Craig, Lee A. 1991. "The Value of Household Labor in Antebellum Northern Agriculture". *Journal of Economic History* 51, 1 (March): 67-81.
- Davis, Joseph H. 2004. "An Annual Index of U.S. Industrial Production, 1790-1915," *Quarterly Journal of Economics* 119, 4 (November 2004): 1177-215.
- Dupont, Brandon and Joshua Rosenbloom. 2016. "The Impact of the Civil War on Southern Wealth Holdings," NBER Working Paper 22184, National Bureau of Economic Research, Cambridge, Mass. (April).
- Engerman, Stanley L. 1966. "The Economic Impact of the Civil War," *Explorations in Economic History* 3, 2: 176-99.
- Frickey, Edwin. 1947. *Production in the United States, 1860-1914*. Cambridge, Mass.: Harvard University Press.
- Gallman, Robert E. 1960. "Commodity Output, 1839-1899." In *Trends in the American Economy in the Nineteenth Century*. Princeton, NJ: Princeton University Press.
- Gallman, Robert E. 1966. "Gross National Product in the United States, 1834-1909." In *Output, Employment and Productivity in the United States After 1800*. New York: National Bureau of Economic Research.
- Gallman, Robert E. and Lee Soltow. 1976. "Men and Wealth in the United States, 1850-1870," *The American Historical Review* 81(5): xx-xx.
- Gilchrist, David T. and W. David Lewis (eds.). 1965. *Economic Change in the Civil War Era*. Greenville, Del: Hagley Foundation.

- Higgs, Robert. 1972. "Did Southern Farmers Discriminate?" *Agricultural History* 46: 325-28.
- Higgs, Robert. 1975. "Did Southern Farmers Discriminate? Interpretive Problems and Further Evidence," *Agricultural History* 49: 445-47.
- Kessel, Reuben A. and Armen A. Alchain. 1959. "Real Wages in the North During the Civil War: Mitchell's Data Reinterpreted," *Journal of Law and Economics* 2 (October): 95-113.
- Lindert, P. H. and J. G. Williamson. 2016. *Unequal Gains: American Growth and Inequality since 1700* (Princeton, NJ: Princeton University Press).
- Margo, Robert A. 1990. *Race and Schooling in the South, 1880-1950: An Economic History*. Chicago: University of Chicago Press.
- Margo, Robert A. 2002. "The North-South Wage Gap, Before and After the Civil War," *NBER Working Paper 8778*, National Bureau of Economic Research, Cambridge, MA (February).
- Mitchell, Wesley C. 1903. *A History of the Greenbacks*. Chicago: University of Chicago Press.
- Ransom, Roger L. and Richard Sutch. 1977. *One Kind of Freedom: the Economic Consequences of Emancipation*. Cambridge: Cambridge University Press.
- Ransom, Roger L. and Richard Sutch. 2001. "One Kind of Freedom: Reconsidered (and Turbo Charged)". *Explorations in Economic History* 38, 1 (January): 6-39.
- Schwartz, Anna Jacobson. 1960. "Gross Dividend and Interest Payments by Corporations at Selected Dates in the 19<sup>th</sup> Century," in *Trends in the American Economy in the Nineteenth Century*. Princeton, N.J.: Princeton University Press, for the National Bureau of Economic Research.
- Smith, Billy Gordon. 1984. "Inequality in Colonial Philadelphia: A Note on Its Nature and Growth." *William and Mary Quarterly* 3rd series 41, 4 (October): 629-645.
- Smith, James P. 1984. "Race and Human Capital," *American Economic Review* 74, 4 (September): 685-698.
- Soltow, Lee. 1971. "Economic inequality in the United States in the period from 1790 to 1860," *Journal of Economic History* 31: 822-839.
- Soltow, Lee. 1975. *Men and Wealth in the United States 1850-1870*. New Haven: Yale University Press.
- Tucker, Rufus S. 1938. "Distribution of Income among Taxpayers in the United States, 1863-1935," *Quarterly Journal of Economics* 3 (August): 547-87.
- Turner, Frederick Jackson. 1921. *The Frontier in American History*. New York: Holt.
- Williamson, Jeffrey G. 1974. "Watersheds and Turning Points: Conjectures on the Long-Term Impact of Civil War Financing," *Journal of Economic History* 34 (September): 636-661.

**Table 1. Estimated American Personal Incomes in 1870**

(millions of current \$)

	Labor earnings	Farm profits	Property income	Total income
New England	804.2	87.7	189.9	1,081.8
Mid Atlantic	2,031.2	168.8	468.1	2,668.2
East North Central	1,395.0	235.0	382.9	2,012.9
West North Central	638.2	101.8	137.0	876.9
North	4,868.6	593.3	1,177.9	6,639.8
South Atlantic	570.0	170.6	96.2	836.8
East South Central	511.8	176.0	83.2	771.0
West South Central	271.6	105.3	29.9	406.8
South	1,353.4	451.9	209.3	2,014.6
Mountain	81.3	3.2	5.6	90.1
Pacific	235.8	21.9	54.8	312.5
West	317.1	25.1	60.4	402.6
United States	6,539.1			

**Source:** Lindert and Williamson 2016: Table 6-1.

**Table 2. Estimated American Personal Incomes in 1860**

(millions of current dollars)

	Free labor <u>income</u>	Slaves' ret. <u>income</u>	Farm <u>profits</u>	Property <u>income</u>	Total <u>income</u>
New England	422.5	0.0	69.4	98.0	589.9
Mid Atlantic	1,054.1	0.0	137.0	261.5	1,452.6
ENC	636.3	0.0	176.0	188.0	1,000.2
WNC	206.5	5.2	48.9	55.2	315.8
North	2,319.4	5.2	431.2	602.7	3,358.5
South Atlantic	333.9	61.7	84.7	238.3	718.5
ESC	234.2	66.1	74.3	194.4	569.0
WSC	144.5	38.7	29.7	102.1	315.0
South	712.5	166.5	188.7	534.8	1,602.5
Mountain	37.2	0.0	2.3	2.6	42.2
Pacific	212.9	0.0	15.2	14.5	242.6
West	250.1	0.0	17.6	17.1	284.7
USA,	3,282.0	171.7	637.5	1,154.6	5,245.8
% of total	62.6	3.3	12.2	22.0	100.0

Source: Lindert and Williamson 2016: Table 5-2.

**Table 3. Real Incomes Per Capita 1860-1870**

A. 1870 Regional income per capita (in 1840 \$)

	Incomes	Population (m.)
New England	203	3.473
Mid Atlantic	199	8.777
East North Central	145	9.085
West North Central	149	3.844
North	172	25.179
South Atlantic	94	5.837
East South Central	115	4.397
West South Central	131	2.023
South	107	12.257
Mountain	191	0.308
Pacific	307	0.665
West	270	0.973
United States	154	38.408

B. Regional income per capita growth rates 1860-1870

	% per annum	total % change
New England	1.13	12
Mid Atlantic	0.64	7
East North Central	0.66	7
West North Central	0.90	9
South Atlantic	-3.75	-32
East South Central	-1.43	-13
West South Central	-2.87	-26
Mountain	-1.00	-9
Pacific	-4.79	-39
United States	-0.39	-4

C. West European per capita income growth rates 1860-1870

	(% per annum)
Austria	0.47
Belgium	1.62
France	-0.08

Germany	1.16
Netherlands	1.43
Switzerland	2.09
United Kingdom	2.59
West Europe	1.33

**Source:** Lindert and Williamson 2018: Table 6-2.

**Table 4. Southern White Incomes 1860-1870**

	(millions of current dollars)			
	<u>1860</u>	<u>(%)</u>	<u>1870</u>	<u>(%)</u>
<i>South Atlantic</i>				
Labor income	333.9	50.2	440.8	63.6
Farm profits	84.7	12.9	158.0	22.8
Property income --	238.3	36.3	94.4	13.6
from realty	72.0	11.0	58.4	8.4
from personalty	166.3	25.3	36.0	5.2
Total income	656.9		693.2	
Income per capita (1840 \$)	184.0		121.4	
<i>East South Central</i>				
Labor income	234.2	46.6	391.3	61.9
Farm profits	74.3	14.8	159.8	25.3
Property income --	194.4	38.7	81.2	12.8
from realty	58.6	11.7	46.8	7.4
from personalty	135.8	27.0	34.3	5.4
Total income	502.9		632.4	
Income per capita (1840 \$)	180.4		134.4	
<i>West South Central</i>				
Labor income	144.5	52.3	198.7	62.2
Farm profits	29.7	10.7	91.8	28.7
Property income --	102.1	37.0	29.0	9.1
from realty	39.0	14.1	16.5	5.2
from personalty	63.1	22.8	12.5	3.9
Total income	276.3		319.4	
Income per capita (1840 \$)	234.7		158.5	
<i>All South</i>				
Labor income	712.6	49.6	1030.8	62.7
Farm profits	188.7	13.1	409.6	24.9
Property income --	534.8	37.2	204.6	12.4
from realty	169.6	11.8	121.8	7.4
from personalty	365.2	25.4	82.8	5.0
Total income	1436.1		1645.0	
Income per capita (1840 \$)	190.6		132.4	

**Source:** Lindert and Williamson 2016: Table 6-3.

**Table 5. The Inequality of American Households' Incomes, 1870**

Region	Gini <u>coeff.</u>	Percent shares of total income						Household	
		Top 1%	Top 5%	Top 10%	Top 20%	Next 40%	Bottom 40%	Mean Income	Median Income
A. All households									
New England	0.519	10.4	27.8	40.7	56.3	32.7	11.0	1,369	862
Middle Atlantic	0.519	9.2	25.8	39.8	56.2	33.2	10.7	1,427	884
East North Central	0.466	9.1	25.9	37.0	52.1	34.0	13.9	1,084	743
West North Central	0.478	9.7	28.2	40.1	53.8	32.3	13.9	1,121	757
South Atlantic	0.530	8.5	24.9	37.0	55.1	36.1	8.7	724	465
East South Central	0.487	8.5	23.9	35.2	52.0	36.6	11.4	884	611
West South Central	0.479	7.5	21.6	32.9	50.0	39.4	10.6	981	725
Mountain	0.449	6.8	21.0	33.0	50.3	35.4	14.3	1,086	718
Pacific	0.498	12.2	28.5	40.5	55.1	32.4	12.5	1,819	1,172
All USA	0.511	9.8	27.2	39.3	55.1	33.7	11.1	1,133	744
B. White households only									
New England	0.519	10.4	27.8	40.7	56.2	32.7	11.1	1,374	867
Middle Atlantic	0.517	9.2	25.6	39.6	56.0	33.2	10.8	1,444	894
East North Central	0.465	9.1	25.9	37.0	52.1	34.0	13.9	1,093	749
West North Central	0.475	9.6	28.0	40.0	53.7	32.3	14.1	1,142	772
South Atlantic	0.483	7.5	22.4	34.0	50.3	39.2	10.5	956	720
East South Central	0.462	7.8	22.7	33.6	49.5	38.1	12.4	1,102	833
West South Central	0.437	7.0	19.9	30.7	46.6	40.7	12.6	1,245	1,079
Mountain	0.446	7.0	21.2	33.0	50.1	35.3	14.6	1,067	718
Pacific	0.493	12.6	28.7	40.4	54.7	32.4	12.9	1,818	1,185
All USA	0.496	9.4	26.3	38.5	54.1	33.9	12.0	1,230	819

**Source** : Lindert and Williamson 2016: Table 6.4.

**Table 6. The Inequality of American Household Incomes, 1860**

Region	Gini coeff.	Percent shares of total income				Bottom 40	Mean h'hold income (curr \$)	
		Top 1	Top 5	Top 10	Top 20			
<u>(A.) All households</u>								
New England	0.457	7.0	20.5	32.3	49.4	12.7	889	
Middle Atlantic	0.488	9.1	23.3	35.7	52.9	11.8	977	
South Atlantic, w FL	0.608	13.7	33.6	47.5	64.8	7.7	651	
South Atlantic, no FL	0.610	13.9	33.9	47.8	65.2	7.8	648	
East North Central	0.399	7.0	19.1	29.6	45.5	16.6	761	
West North Central	0.419	6.9	20.0	30.7	46.6	15.1	749	
East South Central	0.552	12.5	31.4	44.4	60.8	10.8	705	
West South Central	0.569	16.0	34.9	47.2	62.7	10.9	860	
Mountain	0.515	10.2	26.2	39.2	56.1	11.6	1,003	
Pacific	0.415	6.5	18.8	29.7	46.1	14.6	1,937	
All USA	0.511	10.0	25.6	38.0	54.9	10.7	829	
“Original 13”	0.529	9.9	25.5	38.4	56.0	9.3	852	
<u>(B.) Free households only</u>								
South Atlantic, w FL	0.525	11.0	27.9	40.5	56.6	10.9	989	
South Atlantic, no FL	0.527	11.1	28.1	40.7	56.8	10.8	993	
West North Central	0.388	6.6	19.2	29.5	44.9	17.1	806	
East South Central	0.490	10.1	26.9	39.1	54.6	13.3	1,041	
West South Central	0.523	13.6	31.1	42.5	57.4	11.9	1,295	
All USA	0.474	9.4	24.1	35.9	52.1	13.0	944	
“Original 13”		0.491	9.3	23.9	36.2	53.1	11.7	959

**Source:** Lindert and Williamson 2016: Table 5-6.

**Table 7. Earnings Inequality in America 1774-1860**

	Free Households		All Households	
	Gini	Top 10%	Gini	Top 10%
1774	0.370	27.7	0.388	27.9
1850	0.422	34.5	0.459	36.2
1860	0.454	36.0	0.473	37.2

**Source:** Lindert and Williamson 2016: Table 5.4.

**Table 8. The Inequality of American Households' Labor Earnings, 1870**

Region	Gini coeff.	Percent shares of labor earnings						Labor earnings	
		Top 1%	Top 5%	Top 10%	Top 20%	Next 40%	Bottom 40%	Mean	Median
A. All households									
New England	0.516	8.4	28.0	41.3	56.7	31.8	11.5	1,040	662
Middle Atlantic	0.521	8.0	26.1	41.3	57.4	31.5	11.1	1,096	662
East North Central	0.500	9.2	29.4	41.4	56.6	29.8	13.6	768	437
West North Central	0.511	10.3	32.0	45.3	58.5	27.7	13.8	838	483
South Atlantic	0.508	9.7	28.5	40.2	55.4	32.5	12.1	492	306
East South Central	0.472	10.1	27.8	38.6	52.8	32.9	14.3	585	390
West South Central	0.464	9.1	26.2	37.4	52.3	33.1	14.6	651	431
Mountain	0.481	7.0	21.4	34.2	52.5	35.3	12.3	962	553
Pacific	0.479	9.4	26.0	39.2	54.3	31.9	13.9	1,366	832
All USA	0.546	9.7	31.1	44.5	60.2	28.8	11.1	791	420
B. White households only									
New England	0.516	8.4	28.0	41.2	56.7	31.8	11.5	1,043	662
Middle Atlantic	0.520	8.0	25.9	41.2	57.4	31.5	11.1	1,107	672
East North Central	0.501	9.2	29.5	41.5	56.7	29.8	13.5	772	439
West North Central	0.512	10.2	31.9	45.5	58.6	27.6	13.7	852	487
South Atlantic	0.512	8.7	28.3	40.5	56.2	32.0	11.8	608	384
East South Central	0.494	9.7	28.9	40.7	55.1	31.6	13.3	682	440
West South Central	0.482	8.8	26.8	38.9	54.3	31.9	13.9	775	489
Mountain	0.479	7.2	21.5	34.3	52.4	35.1	12.5	938	553
Pacific	0.468	9.5	25.6	38.5	53.3	32.3	14.4	1,320	817
All USA	0.544	9.4	30.4	44.1	60.0	28.9	11.0	849	453

**Source:** Lindert and Williamson 2016: Table 6-5.

**Table 9. Labor Force as a Percentage of Population,  
by Race and Region, 1860 - 1870**

	United States		South		Non-South	
	<u>1860</u>	<u>1870</u>	<u>1860</u>	<u>1870</u>	<u>1860</u>	<u>1870</u>
Whites	30.3	31.8	24.0	28.2	32.5	32.9
Non-whites, total	59.0	46.9	59.2	46.3	55.7	52.0
Non-whites, free only	35.4	46.9	21.9	46.3	52.7	52.0
Non-whites, slaves	61.5		61.5		60.3	

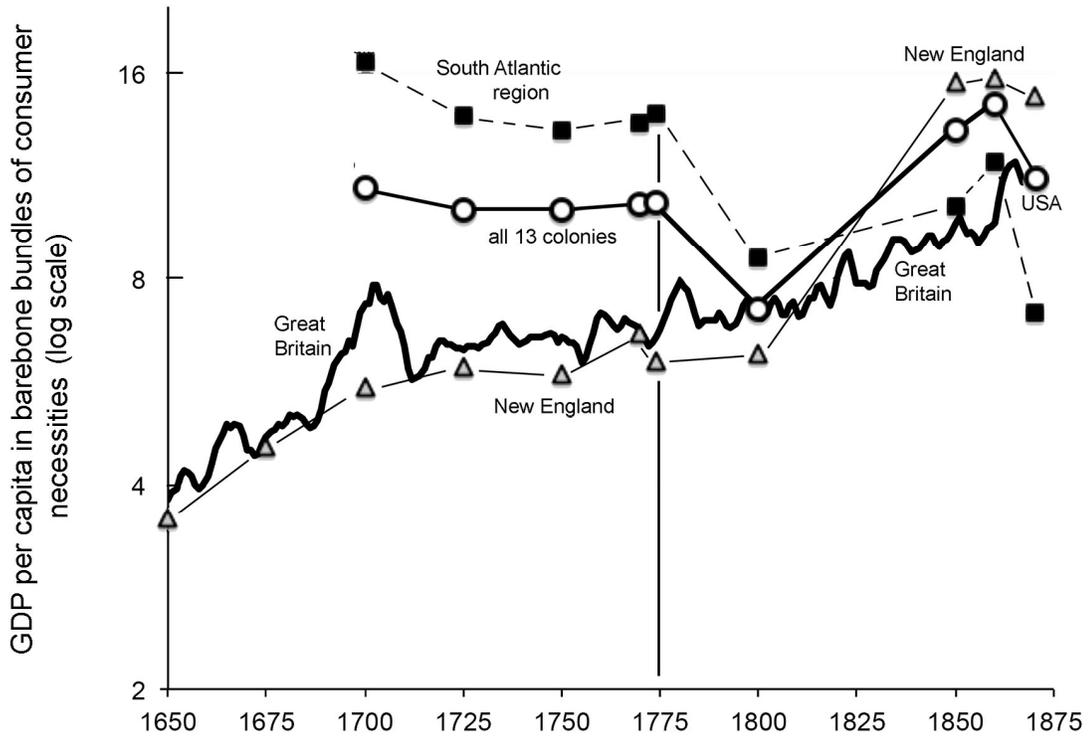
**Source:** Lindert and Williamson 2016: Table 6-6.

**Table 10. The Progress of Black Incomes 1860-1870**

	Real incomes per capita, in 1840 \$					
	Blacks		Whites		Ratio, blacks / whites	
	<u>1860</u>	<u>1870</u>	<u>1860</u>	<u>1870</u>	<u>1860</u>	<u>1870</u>
New England	114.0	146.1	179.0	204.0	0.637	0.716
Mid Atlantic	95.5	93.4	185.8	200.6	0.514	0.466
East North Central	87.6	86.9	137.4	145.6	0.638	0.596
West North Central	42.6	75.9	144.4	151.9	0.295	0.499
North	75.0	89.4	163.2	173.9	0.459	0.514
South Atlantic	35.4	46.3	184.0	121.4	0.192	0.381
East South Central	46.3	64.3	180.4	134.4	0.257	0.478
West South Central	63.5	78.4	234.7	158.5	0.271	0.495
South	43.5	57.6	190.6	132.4	0.228	0.435
Mountain	233.5	137.1	237.8	186.3	0.982	0.736
Pacific	457.7	230.5	526.9	300.3	0.869	0.768
West	444.7	197.5	440.0	262.7	1.011	0.752
All USA	46.5	60.8	176.0	166.5	0.264	0.365

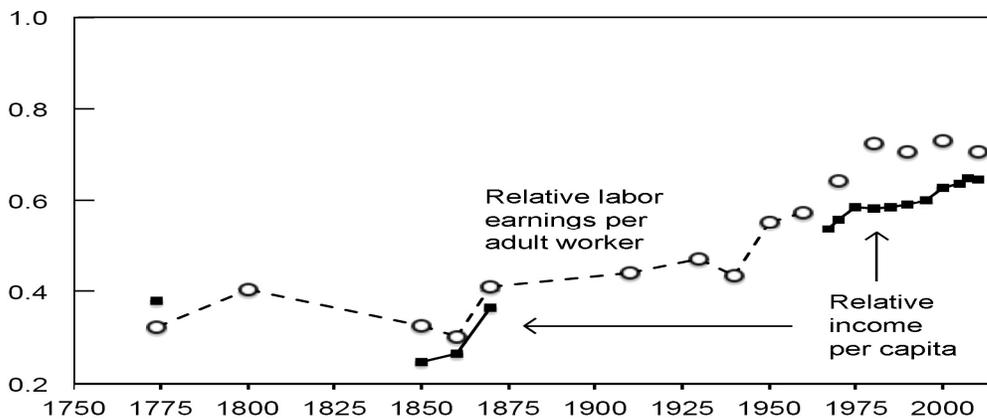
**Source :** Lindert and Williamson 2016: Table 6-7.

**Figure 1. Real GDP per Capita - Britain and America 1650-1870**



Source: Lindert and Williamson 2016: Figure 5-2.

**Figure 2. Black/White Ratios of Earnings per Worker and of Income per Capita, 1774-2010**



Source: Lindert and Williamson 2016: Figure 7-2.