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## **Differences in Wealth, Education, and History**

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1 **Differences in Wealth, Education, and History**

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4 James Edward Curtis, Jr.

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7 September 22, 2017

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10 ABSTRACT An understanding of the freedoms (or the lack of freedoms) and their economic consequences on early black  
11 Americans provides an informative understanding to the freedoms (or the lack of freedoms), and their economic consequences on  
12 other, modern ethnic groups. James Curtis Jr (2017) investigates the link between the social asymmetry and economic asymmetry  
13 among early blacks and whites in the United States of America. For the empirical study, James Curtis Jr (2017) uses cross-  
14 sectional variables from the Integrated Public Use Microdata Sample (IPUMS), developed informative conditional ratios, and  
15 employed least squares statistical analyses.

16  
17 FINDINGS This study finds that economic differences among ethnic groups, as measured by differences between early blacks and  
18 whites, are intertwined with asymmetrical freedoms, leading to statistically insignificant returns to education, as measured by literacy.  
19 One might conclude that the individual’s basic protection of life, liberty, and the pursuit of happiness must proceed any expectations  
20 of measured returns to schooling, particularly among individuals in disenfranchised groups. Furthermore, one might propose  
21 education policy such that modern higher education investment programs prioritize education entrepreneurs and/or  
22 state/social planners with academic research familiarity of differences in wealth.

23  
24 This research is a revision of November 2002, November 2010 and January 2012 working papers. Copyright 2017.

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## INTRODUCTION

Curtis Jr (2012) stated

The debate over market/individual regulation and freedom dates as far back as religious Holy documents, such as The Holy Bible. The Old Testament of The Holy Bible tells of Moses detailing the Ten Commandments, in Exodus 20:2-17. The Ten Commandments are God's basic instruction to his people. The Ten Commandments are seen as the paraphrased *controls* of individuals in markets and society, for those moved by Old Testament Biblical doctrine. One might interpret the New Testament of The Holy Bible as expressing a more *free* form of living, for instance, in passages such as Philippians 4:6-7, "Be careful for nothing; but in everything by prayer and supplication with thanksgiving let your requests be made known unto God. And the peace of God, which passeth all understanding, shall keep your hearts and minds through Christ Jesus" (KJV The Holy Bible, p. 263), and Philippians 4:13, I can do "all things" through Christ Jesus who strengthens (KJV The Holy Bible, p. 263).

Similarly, the debate of more regulation or relative freedom of immigrants has moved backed into the spotlight of America, at the start of 21<sup>st</sup> century, with large masses of Latino/Latina Americans migrating from Central America and South America to North America. Joseph Ferie (1999) thoroughly documented the mid-19<sup>th</sup> century wave of immigrants to the United States of America from Europe. But before the Latino/Latina American immigration discussion commenced and before the European American immigration wave of the mid 19<sup>th</sup> century, the regulation and freedom of black Americans was central to the governance issue of the United States of America. In many ways, a clear understanding of the freedoms (or the lack of freedoms) and their economic consequences on early black Americans provides an understanding to the freedoms (or the lack of freedoms), and their economic consequences on other, modern ethnic groups.

The experience of blacks in America can be divided into three separate discussions, the experience of: (i) free blacks prior to the Civil War, (ii) slaves prior to emancipation and (iii) the experiences of all blacks after the Civil War. But the socioeconomic experiences of the latter two are linked to that of the former:

...In other words, the day after a slave is emancipated from an intergenerational experience of enslavement, what does that ex-slave do? What are his or her goals? Does the slave have a contemporaneous objective to supply labor and consume necessary commodities in a manner that highly discounts the future in order to survive on a day to day basis at the expense of future consumption, or does the slave have an intertemporal objective to store material possessions in a manner that minimizes current consumption, possibly below subsistence, in order to provide a better experience for his or her children? Prior to southern emancipation, some blacks were able to ponder on the same decisions.

Therefore, this paper focuses on the plight of the average antebellum free black American, which, in hindsight, illuminated the path of the average black American, after emancipation, as well as Americans of other ethnicities over time."



68 **Outline**

69

70 I present *the methods of economic analysis, results, and conclusions* from comparing the economic experiences of white Americans  
71 and ex-slaves to free black Americans **1850-1870**. Through these analyses, I intend to uncover the portion of the ethnic  
72 experience explained by institutional barriers and the portion of their experience explained by available socioeconomic choices,  
73 particularly, as it relates to education or literacy. This paper will provide one of the first comprehensive, synthesized analyses of the  
74 demographic, economic, education, and legal freedom experiences of free Black Americans, most who are ex-slaves, compared to  
75 whites in the United States of America.

76

77

78 **Economic Theory: The Economic Expectations before Investigating Evidence in the Data**

79

80 The Study of Wealth. Wealth is the accumulation of material resources that have market value for current or future consumption.  
81 Furthermore, savings, initial wealth and the compounded rate of return on the invested savings and initial wealth determine wealth.  
82 The following section describes universal and group-based expectations, based on economic theory, in the areas of economic  
83 growth (including wealth, property and savings), economic inequality, and comparative economic outcomes. Wealth, property, and  
84 measures of classical economic choice characteristic will be employed to measure outcomes, compared to expectations.

85

86 Economic Growth and the Parabolic Property Ownership Expectations. To analyze the relationship between age and property, I  
87 employ methods developed by Lee Soltow (1975). He expected the old to hold more property than the young : He found that  
88 plots of individuals holding property across age groups shows a "very rapid rise in the probability of ownership in the first 10 years  
89 of adulthood with a tapering affect appearing thereafter" (Soltow, p.28). He suggests that this concavity was affected by the  
90 income and savings decisions and distribution of the population.



91

92 Soltow used estimates of non-property-holders to develop a parabolic model of property holding over different age rages. This

93 theoretical parabolic behavior is based on an assumption that proportion of non-property-holders is fixed across age groups.

94 Soltow expects that 79.3 percent of thirty year-olds who did not hold property in their twenties will not hold property for the

95 same reason as the 79.3 percent who did not hold property when they were in their twenties:

96 "The .793 is a quantification of the importance of all those characteristics inhibiting ownership, such as lack of  
97 knowledge of available land or credit, inability to speak or write English or possibly read any other language, unwillingness  
98 to accept the obligations of ownership, inability to save because of low income or high consumption, legarthy because of  
99 sickness or poor health, and so on. If quantification of .79 were to operate for the group from age 30 to 39, one would  
100 expect the .793 of the property-less at age 30 to remain property-less. Thus,  $1-(.793)^2$  would own property in the  
101 30-39 group" (Soltow, 1972, p.30).

102

103 "The strength of America's system, as seen by nineteenth century writer, was that an individual had the opportunity to  
104 improve his position over time. This opportunity meant that he was not placed in a fixed position in society. He might  
105 have had to work hard, but he could expect betterment in his wealth status. We can capture this phenomenon by  
106 studying the participation rate (proportion of men who held property) of peoples of different ages in a given year. Sure  
107 this rate, as measured by (real estate holding) or (total estate holding) must be higher for the old than for the young....If  
108 the majority of individuals in the economy are to experience betterment in economic position during their lifetimes, more  
109 and more should rise above the level of being poor, above some minimum wealth amount" (p.27).

110

111 Economic Growth and the Linear Growth in Wealth Expectations. To analyze the relationship between age and wealth, I employ

112 additional methods that were first employed by Soltow (1975). He plotted age-wealth coordinates and expected a positive

113 relationship: "Material betterment dominated the economic thinking men. Those with wealth expected to have more each year as

114 they grew older; accumulation was a sign or index of recognition of an individual's past economic activities. Wealth mirrors the past

115 better than income since the pleasures of past consumption may be forgotten. It is only saving from past income that is now

116 reflected in one's wealth" (Soltow, 1975, p.69).

117

118 Soltow did, in fact, observe a linear relationship between estate values and age. The parabolic effect of age on property holding was

119 not present when observing average wealth at different ages. "The group average rises strongly from 20-29 to 30-39 and then

120 has its greatest thrust in going from 30-39 to the 40-49 group. The average tapers off but continues to rise rather surprisingly



121 into old age. There is certainly no strong parabolic effect, as can be seen in...the proportion of men with property" (p.70). He also  
122 suggested that the stability of the 1850 pattern was "proof that the age patterns were established decades before the 1850 and  
123 the concepts of economic betterment must have been pervasive" (Soltow, 1975, pp.74-75).

124

125 Economic Growth and the Savings Rate Expectations. Finally, I use the method proposed by Soltow (1975) to analyze savings  
126 using wealth annualized at each age. Soltow used the differences in wealth at each age to observe the continuity of savings that  
127 continued through old ages. Furthermore, Soltow found the average annual savings rate was about 5 percent. This was obtained by  
128 [1] averaging the increase in wealth per age groups 20-69 or 90 percent of the adult male population  
129  $\{(582+804+311+303)/4 = 500\}$ , [2] annualizing the average increase per age group or decade  $\{500/10=50\}$ , and [3]  
130 dividing the average annual increase in wealth by the average wealth in 1850  $\{50/1001=.05\}$ . Note that this finding of 5  
131 percent is the average for individuals. Since households possess more wealth than individuals, this rate is expected to much be  
132 smaller in the forthcoming empirical analysis. "The difference between in wealth levels from one year to the next gives an index of  
133 saving for a year" (pp.71-72).

134

135 Classical Characteristic Premium Expectations. *Schooling*. Jacob Mincer (1974) described a direct relationship between schooling  
136 and earnings:

137 "it is equally correct to say that the distribution of earnings is determined by the distribution of accumulated human capital  
138 and of rates of return to human capital investment or that the distribution of earnings is determined by the distribution of  
139 ability and opportunity. Or, putting it in a causal hierarchy, the distribution of accumulated human capital is a proximate  
140 determinant of the distribution of earnings, and is treated that way in this study. In turn, ability and opportunity determine  
141 the distribution of human capital. (Mincer 1974, p.138)"  
142

143 *Skill*. Classical economic theory suggests workers are paid their additions to production. This produces an expectation of higher  
144 wages for higher skilled workers and lower wages for lower skilled workers. Holding constant the intertemporal rate of return to



145 saved wages, holding constant differences in initial wealth, and holding constant the number of working hours (see James Curtis Jr,  
146 December 2002), it is reasonable expect higher wealth among higher skilled employees.

147 Convergence to Equality Expectations. To measure economic inequality and compare differences in economic outcomes, I analyze  
148 differences in differences in mean wealth between blacks and whites, and property ownership between blacks and whites. The  
149 following ratios measure differences in wealth and differences in property ownership among two comparison groups to obtain  
150 comparative returns to classical characteristic choices. Foremost, the **comparative wealth ratio** is

151

152 Equation 1.1 
$$[W_{XJT}/W_{X'JT}] / [W_{X'JT}/W_{X'JT}] \geq 1$$

153 Equation 1.1' 
$$[W_{XJT}/W_{X'JT}] / [W_{X'JT}/W_{X'JT}] \leq 1$$

154

155 where  $W_{XJT}$  is the mean wealth of the members of group J who made investment X at time T.

156

157 The comparative wealth ratio ignores differences in wealth levels and measures the return to classical characteristic choices among  
158 groups. For instance, the ratio measures the schooling premium for blacks relative to the schooling premium for whites. If the ratio  
159 is less than one, then blacks with many years of schooling may have lower levels of wealth relative to whites with proportional years  
160 of schooling, and, thus, the returns to schooling among whites outpace the returns to schooling among blacks, in terms of wealth.

161

162 Similarly, the **comparative property ownership ratio** is

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164 Equation 1.2 
$$[Q_{XJT}/Q_{X'JT}] / [Q_{X'JT}/Q_{X'JT}] \geq 1$$

165 Equation 1.2' 
$$[Q_{XJT}/Q_{X'JT}] / [Q_{X'JT}/Q_{X'JT}] \leq 1$$



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167 where  $Q_{XJT}$  is the percentage of the members of group J who own property and made investment X at time T.

168

169 The comparative property ownership ratio can be interpreted the same as the comparative wealth ratio. The comparative property

170 ownership ratio measures the impact of classical characteristics on property ownership of group J to the impact of classical

171 characteristics of property ownership of group J'. For instance, the ratio measures the schooling premium of blacks relative to the

172 whites. If the ratio is less than one, then blacks with many years of schooling may own less property relative to whites with

173 proportional years of property, and, thus, the returns to schooling among whites with many years of schooling outpace the returns

174 to schooling among blacks with proportional years of schooling, in terms of property ownership.

175

176 Motivations for Multivariate Analysis. To observe of combined effect of laws, demography and economic geography of the

177 economic outcomes of whites and blacks, I employed standard minimization of the sum of squared errors and conducted non-linear

178 multivariate analysis on the logarithmic total wealth of whites and blacks in 1860 and 1870. Previous papers provide theoretical

179 motivation for econometric modeling choices, which are similar to this presentation. Logarithmic wealth is regressed against proxy

180 variables for earnings and savings, proxy variables for initial wealth, and household formation variables. Including slave state-free

181 state residency variables and regional residency variables could lead to multicollinearity, due to possible endogeneity. The directions

182 of the predictions of estimated coefficients, which are statistically significant at a 95 percent level of significance, were summarized

183 in the results section.

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RESULTS

187

188 **The Mid-19<sup>th</sup> Century Age and Property Profiles of Whites and Free Blacks in the United States of America**

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190 In 1850, Table 8ab-1 shows that between 35.8 – 67.1 percent of whites were real estate property holders across different

191 age groups while only 14.3 – 28.0 percent of free blacks were real estate property holders across age groups.

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194 **Table 8ab-1. Real Estate Property-Holding Patterns by Age Group and Race, 1850-1860**

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Age Group	1850 Real Estate Holders							1860-1850 Difference
	Whites			Free Blacks			White-Free Black Difference	
	Actual	Theoretical	Difference	Actual	Theoretical	Difference		
20-29	0.358	0.358	-	0.163	0.163	-		
30-39	0.512	0.588	(0.076)	0.151	0.300	(0.149)	0.073	(0.009)
40-49	0.586	0.735	(0.149)	0.195	0.414	(0.218)	0.070	(0.046)
50-59	0.630	0.830	(0.200)	0.280	0.509	(0.229)	0.029	0.014
60-69	0.671	0.891	(0.220)	0.258	0.589	(0.332)	0.112	(0.044)
70-79	0.609	0.930	(0.321)	0.222	0.656	(0.434)	0.113	0.066
80-89	0.460	0.955	(0.495)	0.143	0.712	(0.570)	0.075	0.055

Age Group	1860 Real Estate Holders						
	Whites			Free Blacks			White-Free Black Difference
	Actual	Theoretical	Difference	Actual	Theoretical	Difference	
20-29	0.369	0.369	-	0.175	0.175	-	
30-39	0.531	0.602	(0.071)	0.185	0.319	(0.134)	0.064
40-49	0.632	0.749	(0.117)	0.297	0.438	(0.141)	0.024
50-59	0.696	0.842	(0.146)	0.347	0.536	(0.190)	0.044
60-69	0.725	0.900	(0.175)	0.375	0.617	(0.242)	0.068
70-79	0.681	0.937	(0.256)	0.250	0.684	(0.434)	0.179
80-89	0.684	0.960	(0.276)	0.333	0.739	(0.406)	0.130

Source: Information collected, calculated and compiled by James Curtis Jr (2002); IPUMS

221 The proportion grew to 36.9 – 72.5 percent for whites and 17.5–37.5 percent for free blacks in 1860. Furthermore, when

222 comparing actual to fixed proportions among free blacks and whites, the actual white proportion of property-holders across age



223 groups was closer to the white fixed or theoretical proportions in 1850 and 1860. This suggests that the events which prevent  
224 holding property across age groups were relatively more fixed for whites than free blacks. Instead, enforcement of laws that reduced  
225 the rights of free blacks, such as the Fugitive Slave Act, had a direct impact on the capacity of the average free black to hold  
226 property, producing relatively more random patterns of holding property across all ages. When comparing white-free black  
227 differences in 1850 and 1860, Table 7a shows that white-free black differences fell for younger members of the age distribution  
228 but grew for the older members of the distribution.

229

### 230 **The Mid-19<sup>th</sup> Century Age and Wealth Profiles of Whites and Blacks in the United States of America**

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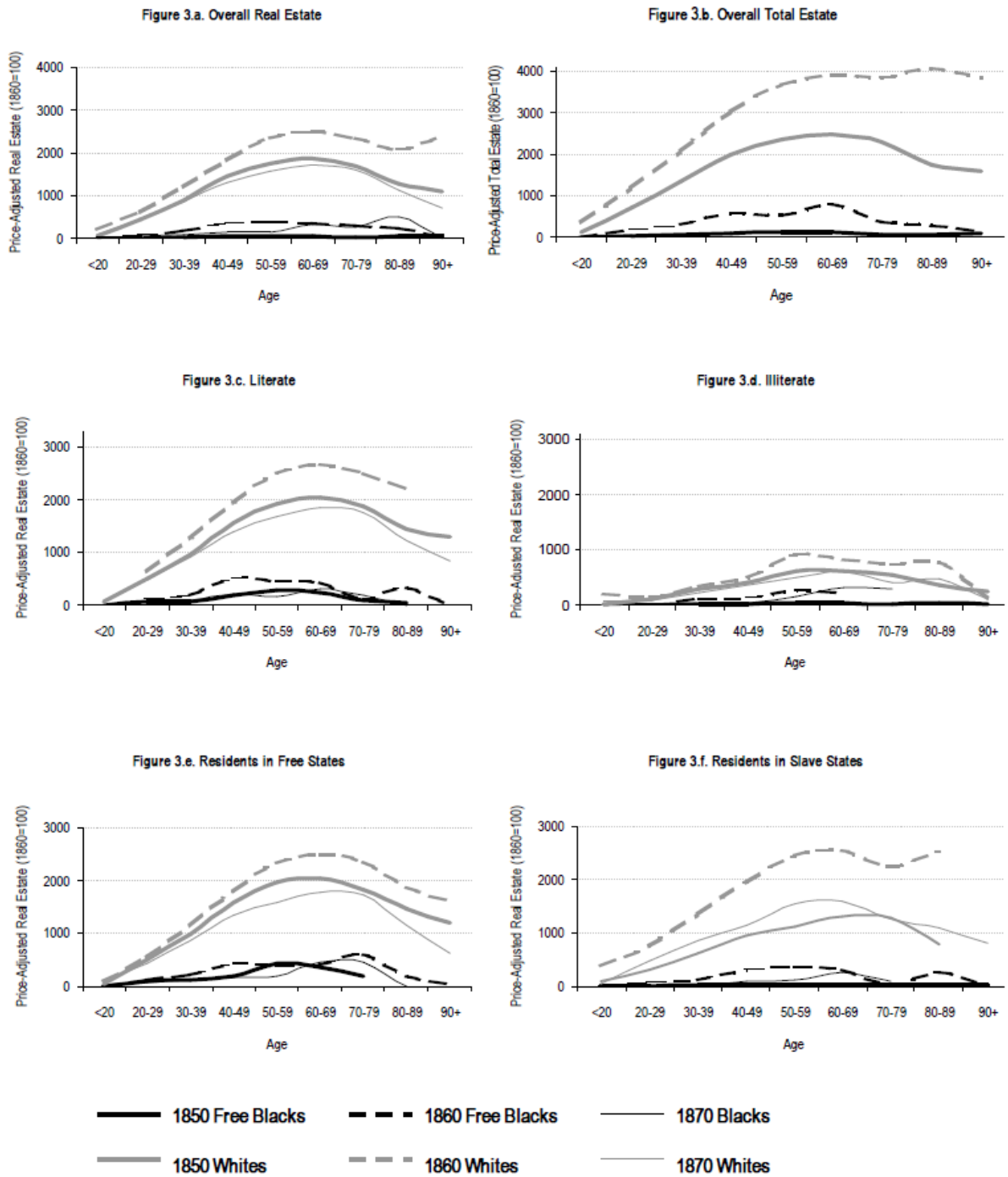
232 Figures 3.a.-3.f. are plots of the age-wealth profiles by race, year and cross section. Figure 3b plots total wealth and shows the  
233 least amount of dissaving occurring among whites.

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**Figures 3.a.-3.f. Age-Wealth Profiles of Whites and Blacks, 1850 through 1870**



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276 However, when comparing to blacks and the real estate wealth of whites and blacks, dissaving is definite reality at older ages<sup>20</sup>.

277 <sup>20</sup> Masson (1986), Mirer (1979) and Shorrocks (1975) found cross-sectional age-wealth profiles that were concave only  
278 when they did not control for factors such as cohort and mortality differences.

279

280 Furthermore, the difference between black and white age-wealth profiles is quite dramatic: The distance between black and white  
281 profiles tends to peak in the fifties. Finally, Figures 3c-f show that the dominant wealth possession of whites remained across time,  
282 education and region.

283

284 These profiles are preliminary evidence that making choices to improve education and social surrounding did not provide a clear  
285 wealth reward. The local definition of free black rights had diluted any attempts to make individual economic gains.

286

### 287 **The Mid 19<sup>th</sup> Century Savings of Whites and Free Blacks in the United States of America**

288

289 Table 8c shows that white households (3.6 percent) saved less real estate wealth, annually, than free black households (3.8  
290 percent) in 1850.

291

292



**Table 8c-1. Wealth Accumulation Patterns by Age Group and Race, 1850-1860**

Age Group	1850 Real Estate Wealth				1860 Real Estate Wealth				1860 Total Wealth			
	Whites		Free Blacks		Whites		Free Blacks		Whites		Free Blacks	
	Average	Change	Average	Change	Average	Change	Average	Change	Average	Change	Average	Change
20-29	515		49		726		90		1,476		169	
30-39	1,043	528	79	30	1,480	754	146	56	2,619	1,144	275	105
40-49	1,792	750	134	55	2,519	1,039	312	166	4,430	1,811	449	175
50-59	2,273	480	370	236	3,417	897	416	104	5,625	1,194	581	132
60-69	2,675	402	336	(34)	3,432	15	342	(74)	5,475	(150)	1,165	583
70-79	2,403	(272)	1,021	685	3,600	168	158	(184)	6,178	704	236	(929)
80-89	3,228	825	498	(523)	3,718	118	360	203	6,612	434	392	156
20-69 Average		540		72		676		63		1,000		249
Overall Average		1,486		189		2,050		286		3,556		501
Savings Rate		3.6%		3.8%		3.3%		2.2%		2.8%		5.0%

**Source:** Information collected, calculated and compiled by James Curtis Jr (2002); IPUMS

But by 1860, free black households (2.2 percent) saved less real estate wealth than white households (3.3 percent). This result is picking up the economic push effects of enhanced enforcement of controversial fugitive slave laws. But, in terms of total wealth, free black households (5.0 percent) were saving more than whites in 1860 (2.8). This is both attributed to the low level of wealth in free blacks started from and possibly the desire for descendants to have an enriched economic experience.

**The Mid 19<sup>th</sup> Century Schooling and Wealth of Whites and Blacks in the United States of America**

Jacob Mincer (1974) described a direct relationship between schooling and earnings. When comparing the real estate wealth of literate and illiterate free blacks, literate free blacks outperformed illiterate free blacks. These results held when comparing differences in other and total forms of wealth among literate and illiterate free blacks. Table 8a-2 shows that literate free blacks possessed \$520 in nominal total wealth in 1860 prior to emancipation.



**Table 8a-2. Mid 19<sup>th</sup> Century Schooling and Mean Wealth of Whites and Blacks**

	Overall			Free Blacks			All Blacks			Whites		
	1850	1860	1870	1850	1860	1870	1850	1860	1870	1850	1860	1870
<b>Literate</b>												
Real Estate Wealth	1,030	1,568	1,872	133	316	206	1,042	1,597	1,953			
Other Wealth		1,001	753		204	98		1,019	785			
Total Wealth		2,569	2,625		520	304		2,616	2,737			
<u>Price-Adjusted (1860=100)</u>												
Real Estate Wealth	1,142	1,616	1,265	149	325	135	1,155	1,646	1,320			
Other Wealth		1,062	504		209	64		1,081	525			
Total Wealth		2,678	1,769		534	199		2,727	1,845			
Sample	31,393	47,808	62,284	406	992	2,761	30,987	46,745	59,401			
<b>Illiterate</b>												
Real Estate Wealth	263	412	212	93	151	31	282	458	586			
Other Wealth		295	105		121	41		324	236			
Total Wealth		708	317		273	72		782	823			
<u>Price-Adjusted (1860=100)</u>												
Real Estate Wealth	296	436	143	105	160	20	317	483	398			
Other Wealth		320	70		133	26		352	159			
Total Wealth		756	213		293	46		836	556			
Sample	3,709	5,251	24,073	365	710	16,175	3,344	4,497	7,855			

**Source:** Information collected, calculated and compiled by James Curtis Jr (2002); IPUMS

This was higher than the \$273 possessed by illiterate free blacks. Note that literate free blacks were equally likely as illiterate free blacks to hold real estate or other forms of property. However, literate blacks had 19.9 percent (520/2616) of literate white total wealth while illiterate free blacks had 34.9 percent (273/782) of illiterate white wealth in 1860. These results may imply that the penalty for illiteracy was so severe that the wealth of illiterate whites was relatively closer to wealth of illiterate free blacks than wealth among literate free blacks and whites. This is accredited to a nineteenth century racial asymmetrical skill-bias in favor of literate whites: Free blacks and whites were proportionately penalized but not proportionately rewarded for education. Furthermore,



362 when we ignore differences in wealth levels among free blacks and whites, literacy did not provide free blacks an advantage relative  
363 to whites.

364

365 Overall, investing time and resources in education does not guarantee economic equality if factors such as initial resources vastly  
366 differ. These results also imply that illiteracy penalized free blacks in manner similar to whites more than literacy benefited free  
367 blacks relative to whites. This analysis directly links the asymmetrical enforcement of federal statutes by states, which affect the  
368 rights of free blacks, to asymmetrical wealth returns to the optimal wealth generating characteristics, such as literacy.

369

370 *The Mid 19<sup>th</sup> Century Schooling and Real Estate of Blacks: A Comparison of Black Americans over Time*

371

372 Real estate wealth differences favored literate blacks before and after emancipation. Table 8a-2 shows that literate free blacks  
373 possessed nominal real estate wealth amounts of \$133 in 1850 and \$316 in 1860. This was higher than the \$93 possessed  
374 by illiterate free blacks in 1850 and \$151 possessed by illiterate free blacks in 1860. Table 8a also shows that the literate-  
375 illiterate ratio of average real estate wealth among free blacks grew from 1.3 in 1850 and 2.0 in 1860. This may be preliminary  
376 evidence of a growing penalty for illiteracy. Literate free blacks were also more likely to hold real estate property than illiterate free  
377 blacks even then proportion of literate free black property holders remained constant. Table 8b-2 shows that 20 percent of  
378 literate free blacks in 1850 and 25 percent of literate free blacks in 1860 owned positive amounts of real estate wealth.

379





**Table 8b-2. Mid 19<sup>th</sup> Century Schooling and Mean Property Ownership of Whites and Blacks**

	Overall			Free Blacks			All Blacks	Whites		
	1850	1860	1870	1850	1860	1870		1850	1860	1870
<b>Literate</b>										
Real Property Holders	0.54	0.56	0.54	0.20	0.25	0.15		0.54	0.57	0.56
Other Property Holders		0.81	0.70		0.54	0.28			0.81	0.72
Real or Other Property Holders		0.84	0.75		0.58	0.32			0.84	0.77
Sample	31,393	47,808	62,284	406	992	2,761		30,987	46,745	59,401
<b>Illiterate</b>										
Real Property Holders	0.36	0.36	0.17	0.18	0.23	0.05		0.38	0.39	0.41
Other Property Holders		0.72	0.31		0.56	0.20			0.75	0.55
Real or Other Property Holders		0.75	0.35		0.60	0.22			0.77	0.62
Sample	3,709	5,251	24,073	365	710	16,175		3,344	4,497	7,855

**Source:** Information collected, calculated and compiled by James Curtis Jr (2002); IPUMS

This was greater than the 18 percent of illiterate free blacks in 1850 and 23 percent of illiterate free blacks in 1860 that possessed positive amounts of real estate wealth. Table 8c shows that the ratio of literate free black real estate holders (per hundred literate free blacks) to the number of illiterate free black real estate holders (per hundred illiterate free blacks) remained constant at 1.1 in 1850 and 1860.

By 1870, the return to literacy among blacks grew dramatically. Table 8c-2 shows that the ratio of literate to illiterate average real estate wealth for all blacks—which includes ex-slaves who held little or no real estate property—grew to 6.8.





**Table 8c-2. Mid 19<sup>th</sup> Century Comparative Wealth Ratios and Comparative Property Ownership Ratios of Whites and Blacks, Based on Schooling**

	All Blacks			Whites			Black-White Ratio		
	1850	1860	1870	1850	1860	1870	1850	1860	1870
<u>i) Literate/Illiterate Mean Wealth Ratio</u>									
Real Estate	1.4	2.0	6.8	3.6	3.4	3.3	0.4	0.6	2.0
Other		1.6	2.4		3.1	3.3		0.5	0.7
Total		1.8	4.3		3.3	3.3		0.6	1.3
<u>ii) Literate/Illiterate Mean Property-Holding Ratio</u>									
Real Estate	1.1	1.1	2.7	1.4	1.5	1.4	0.8	0.7	2.0
Other		1.0	1.4		1.1	1.3		0.9	1.1
Total		1.0	1.5		1.1	1.3		0.9	1.2

**Source:** Information collected, calculated and compiled by James Curtis Jr (2002); IPUMS

This implies that, on average, literate ex-slaves possessed seven dollars for every dollar of real estate wealth owned by an illiterate ex-slave. Yet the relative sample sizes suggest that approximately one in seven (2761/18936) blacks were able to take advantage of the large literacy premium in 1870. Slave owner discouragement of educating slaves caused illiterate ex-slaves to be severely handicapped in the wealth accumulation process.

Similarly, Table 8c-2 shows that the ratio of literate black real estate holders (per hundred literate blacks) to illiterate blacks real estate property holders (per hundred illiterate blacks) was 2.7—for every illiterate black real estate holder (per hundred illiterate blacks), there were three literate black real estate holders (per hundred literate blacks).



434 *The Mid 19<sup>th</sup> Century Schooling and Real Estate: A Comparison of White and Black Americans over Time*

435

436 When comparing average real estate wealth of free blacks to the average real estate wealth of whites by literacy before  
437 emancipation, illiterate white wealth was closer to illiterate free black wealth than literate black wealth to literate white wealth. Using  
438 wealth means in Table 8a-2, literate free blacks had 12.8 percent (133/1042) of the average real estate wealth among literate  
439 whites in 1850 and grew to 19.8 percent (316/1597) of the average real estate wealth among literate whites in 1860. But  
440 illiterate free blacks had 33.0 percent (93/282) of the average real estate wealth among illiterate whites in 1850 and 1860  
441 (151/458). The penalty for illiteracy in the nineteenth century caused illiterate whites and blacks to have a relatively closer  
442 economic experience than literates. This is quite similar to a skill-biased economy that rewards college education and penalizes high  
443 school drop-outs discussed in the 1980's by Juhn, Murphy and Pierce (1991) but with a caveat: the nineteenth century skill bias  
444 was racially asymmetrical in favor of whites.

445

446 The relatively closer economic experience of free black and white illiterates was observed when analyzing the proportion of free  
447 black real estate holders relative to white real estate holders. The ratio of literate free black real estate holders (per hundred literate  
448 free blacks) to literate white real estate holders (per hundred literate whites) was approximately 1:3 (0.20 : 0.54) in 1850 and  
449 2:5 (0.25 : 0.57) in 1860. Among illiterates, the ratio rose to approximately 1:2 (0.18 : 0.38) in 1850 and 6:10 (0.23 :  
450 0.39) in 1860.

451

452 By 1870, the ratio of black to white average real estate wealth and property holders fell significantly with the inclusion of ex-  
453 slaves in the sample but a distinct literacy advantage emerged. Using wealth means from Table 8a-2, 1870 literate blacks held  
454 10.5 percent (206/1953) of the real estate wealth of literate whites while illiterate blacks held 5.3 percent (31/586) of the  
455 real estate wealth of illiterate whites. Similarly, using the percentage of property holders in Table 8b-2, the ratio of literate black  
456 real estate property holders (per hundred literate blacks) to literate white property holders (per hundred literate whites) was



457 approximately 1:4 (0.15 : 0.56). Among illiterates, the ratio was approximately 1:8 (0.05 : 0.41) in 1870. A relative racially  
458 symmetrical literacy advantage was after emancipation even though literate blacks still possessed real estate wealth that was  
459 significantly below literate whites.

460

461 Using the *comparative wealth ratio* for real estate wealth, we can ignore the absolute differences in black and white real estate  
462 wealth and ascertain the literacy advantages in the presence of wealth constraints. Since the ratio in Table 8c was less than one in  
463 1850 (0.4) and 1860 (0.6), whites obtained higher return to literacy than free blacks. In 1870, the ratio in Table 8c-2 grew  
464 to 2.0 which implies that blacks receive a higher return literacy in the presence wealth constraints than whites. This may suggest  
465 that (i) higher skilled occupations that pay higher wages and (ii) higher yield investment opportunities that are normally available to  
466 more educated individuals were not made available to blacks until their rights were more fully enforced, such as those provided by  
467 federal government after 1865.

468

469 Similar results were obtained using the *comparative property ownership ratio* for real estate property in Table 8c-2. Since the  
470 statistic was below one in 1850 (0.8) and 1860 (0.7), whites obtained higher return to literacy than free blacks. The statistic  
471 grew to 2.0 in 1870, again, suggesting a dramatic growth in the literacy premium for blacks once individual rights were protected  
472 under the force of law.

473

474



475 *The Mid 19<sup>th</sup> Century Schooling and Other Wealth of Blacks: A Comparison of Black Americans over Time*

476

477 Literate blacks also had nominal advantages but relative disadvantages in terms of other measures of wealth before and after  
478 emancipation. Table 8a-2 shows that literate free blacks possessed \$204 in nominal other wealth in 1860 prior to  
479 emancipation. This was higher than the \$121 possessed by illiterate free blacks. Thus, free blacks in free states possessed 160  
480 percent of other forms of wealth owned by illiterate free blacks. However, literate free blacks were approximately equally as likely as  
481 illiterate free blacks to hold other forms of property. Table 8b-2 shows that 54 percent of literate free blacks that possessed  
482 positive amounts of other wealth in 1860. This was only slightly lower than the 56 percent of illiterate free blacks that possessed  
483 positive amounts of other wealth in 1860.

484

485 The combinations of these results suggests illiterate free blacks per hundred are equally as likely to hold other forms property but  
486 the literate free blacks use their enhanced knowledge to grow the value of their property larger than the value of illiterate property.  
487 By 1870, the return to literacy grew dramatically. Table 8c-2 shows that the ratio of literate to illiterate other forms of wealth for  
488 all blacks—which includes ex-slaves who held little or no real estate property—grew to 2.4. This implies that literate ex-slaves  
489 possessed two dollars for every dollar of wealth owned by an illiterate ex-slave. Similarly, Table 8c shows that the ratio of literate  
490 black property holders (per hundred literate blacks) to illiterate property holders (per hundred illiterate blacks) was 1.4.

491

492 *The Mid 19<sup>th</sup> Century Schooling and Real Estate: A Comparison of White and Black Americans over Time*

493

494 The closer economic experiences of illiterate blacks and whites persisted when comparing other wealth of blacks to the other wealth  
495 of whites before and after emancipation. Using wealth means in Table 8a-2, literate blacks had 20.0 percent (204/1019) of  
496 literate white other wealth in 1860 and 12.5 percent (98/785) of literate white wealth in 1870. However, illiterate free blacks



497 had 37.3 percent (121/324) of illiterate white wealth in 1860 and 17.6 percent (41/236) of illiterate white wealth in  
498 1870.

499

500 These results confirm a penalty for illiteracy was so severe that the other forms of wealth of illiterate whites was relatively closer to  
501 wealth of illiterate blacks than blacks and whites who could read and write. This may also explain the closer experience of illiterate  
502 property holders when analyzing the proportion of blacks holding other forms of property relative to whites holding other forms of  
503 property. The ratio of literate blacks (per hundred literate blacks) to literate whites (per hundred literate whites) with other forms of  
504 property was approximately 2:3 (0.54 : 0.81) in 1860 and 1:3 (0.28 : 0.72) and 1870. Among illiterates the ratio rose to  
505 approximately 3:4 (0.56 : 0.75) in 1860 and 1:3 (0.20 : 0.55) in 1870.

506

507 Using the *comparative wealth ratio* for other forms of wealth, we can ignore the absolute differences in black and white wealth and  
508 ascertain the literacy advantages in the presence of wealth constraints. Since the ratio in Table 8c-2 was less than one in 1860  
509 (0.5) and 1870 (0.7), whites obtained higher returns to literacy than blacks. Similar results were obtained using the *comparative*  
510 *property ownership ratio* for other forms of property. Since the ratio reported in Table 8c-2 was less than one in 1860 (0.9)  
511 and approximately equal to one in 1870 (1.1), whites obtained higher or equal returns to literacy than blacks before and after  
512 emancipation.

513

514



515 *The Mid 19<sup>th</sup> Century Schooling and Total Wealth of Blacks: A Comparison of Black Americans over Time*

516

517 When summing up real estate and other forms of wealth, empirical results show that literate blacks were better off before and after  
518 emancipation. Table 8a-2 shows that literate free blacks possessed \$520 in nominal total wealth in 1860 prior to emancipation.  
519 This was higher than the \$273 possessed by illiterate free blacks. However, literate free blacks were equally likely as illiterate free  
520 blacks to hold real estate or other forms of property. Table 8b-2 shows that 58 percent of literate free blacks that possessed  
521 positive amounts of total wealth in 1860. This was only slightly lower than the 60 percent of illiterate free blacks that possessed  
522 positive amounts of total wealth in 1860. The combination of these results suggests illiterate free blacks are about equally as likely  
523 to hold property but the literate free blacks use their knowledge to grow the value of their property larger than illiterate property.  
524 By 1870, the return to literacy grew dramatically. Table 8c-2 shows that the ratio of literate to illiterate real estate wealth for all  
525 blacks—which includes ex-slaves who held little or no real estate property—grew to 4.3. This implies that literate ex-slaves  
526 possessed four dollars for every dollar of total wealth owned by an illiterate ex-slave. Similarly, Table 8c-2 shows that the ratio of  
527 literate black total property holders (per hundred literate blacks) to illiterate black total property holders (per hundred illiterate  
528 blacks) was 1.5—for every literate free black real estate holder, there were two illiterate free black real estate holders.

529

530 *The Mid 19<sup>th</sup> Century Schooling and Total Wealth: A Comparison of White and Black Americans over Time*

531

532 The closer economic experiences of illiterate blacks and whites persisted even when comparing total wealth of blacks to the total  
533 wealth of whites before, but reversed after emancipation. Using wealth means in Table 8a-2, literate blacks had 19.9 percent  
534 (520/2616) of literate white total wealth while illiterate free blacks had 34.9 percent (273/782) of illiterate white wealth in  
535 1860. By 1870, things had reversed such that literate free blacks had 11.1 percent (304/2737) of literate white wealth while  
536 illiterate free blacks had 8.7 percent (72/832) of illiterate white wealth. These results may imply that the penalty for illiteracy was



537 so severe that the wealth of illiterate whites was relatively closer to wealth of illiterate blacks than blacks and whites who could read  
538 and write before emancipation, but legal enforcement of rights improved the returns to literacy after emancipation.

539  
540 Similarly, this illiteracy penalty was observed when analyzing the proportion of blacks holding property relative to whites. The ratio  
541 of literate blacks (per hundred literate blacks) to literate whites (per hundred literate whites) with property was approximately 2:3  
542 (0.58 : 0.84) the ratio rose to approximately 3:4 (0.60 : 0.77) among illiterates in 1860. By 1870, the literate ratio of 2:5  
543 (0.32 : 0.77) exceeded the illiterate ratio of 1:3 (0.22 : 0.62) in 1870.

544  
545 Using the *comparative wealth ratio* for other forms of wealth, we can ignore the absolute differences in black and white wealth and  
546 ascertain the literacy advantages in the presence of wealth constraints. Since the ratio in Table 8c-2 was less than one in 1860  
547 (0.6) and 1870 (1.3), whites obtained higher returns to literacy than free blacks before emancipation and literate ex-slave  
548 obtained a higher return to literacy than ex-slaves. Again, the penalty for illiteracy was so severe that the wealth of illiterate whites  
549 was relatively closer to wealth of illiterate blacks than blacks and whites who could read and write before emancipation, but legal  
550 enforcement rights improved the returns to literacy after emancipation. Similar results were obtained using the *comparative property*  
551 *ownership ratio* for other forms of property. Since the ratio reported in Table 8c-2 was less than one in 1860 (0.9) and greater  
552 than one in 1870 (1.2), whites obtained higher returns to literacy than blacks before emancipation and reversed after  
553 emancipation.

554  
555 Once the equal enforcement of laws began to converge more rapidly, with the mass emancipation of Southern slaves, some blacks,  
556 with schooling advantages, observed returns to schooling, in the black community, that were greater than the returns to schooling of  
557 whites, with schooling advantages in the white community. This schooling premium advantage observed after the emancipation of  
558 slaves was, in part, due to combining blacks with longer histories of emancipation, and with maximum free market experiences, and  
559 the plurality of blacks with shorter histories of emancipation, and with minimum free market experiences. This uncompensated



560 change in social standing may be preliminary evidence of the sources of greater inequality and skewed media documentations of  
561 social unrest observed among disenfranchised groups throughout history.

562

563 **Non-Linear Least Squares Multivariate Analysis of Logarithmic Total Wealth of Whites and Blacks in 1860 and 1870**

564

565 Table 13 shows logarithmic wealth is regressed against proxy variables for earnings and savings, proxy variables for initial wealth, and  
566 household formation variables. Results, which had a 95 percent level of significance, are summarized below.

567

568 Savings and Schooling. *Savings*. Results show higher, statistically significant, diminishing increases in wealth savings with age among  
569 whites, compared to blacks, in 1860 and 1870. *Schooling*. Similarly, results show higher returns to schooling, for whites relative  
570 to blacks, in 1860 and 1870, holding all other variables constant; however, these results were not statistically significant for free  
571 blacks in 1860.

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Table 13. OLS Estimates Based on Log Real Total Wealth by Race, 1860-70

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Race: Year: OLS Regression with:	Whites				Blacks			
	1860		1870		1860		1870	
	Slave State	Region	Slave State	Region	Slave State	Region	Slave State	Region
Constant	1.14	1.01	0.13	(0.18)	2.30	2.61	1.89	2.22
Literacy	1.02	1.02	1.14	1.12	0.25	0.21	0.34	0.35
Slave State	0.18		(0.97)		0.01		(1.38)	
Migrated to the Region	(0.50)	(0.66)	(0.34)	(0.50)	0.39	0.26	0.26	0.21
Rural	0.82	0.73	0.71	0.58	0.26	0.30	0.17	0.17
Age	0.14	0.14	0.18	0.18	0.09	0.09	0.04	0.04
Age Squared	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of Children	(0.03)	(0.04)	(0.02)	(0.03)	0.01	0.00	0.03	0.03
Number of Household Members	0.11	0.11	0.10	0.10	0.05	0.04	0.05	0.06
Married	0.24	0.19	0.02	0.02	0.48	0.47	0.33	0.34
<u>Occupational Skill</u>								
Unskilled	(2.86)	(2.79)	(2.71)	(2.66)	(2.93)	(2.86)	(1.64)	(1.64)
Skilled	(1.72)	(1.64)	(1.97)	(1.88)	(2.18)	(2.13)	(0.95)	(0.95)
White Collar	(0.05)	(0.01)	(0.11)	(0.08)	(0.91)	(0.97)	0.45	0.46
Student/Retired	(0.10)	(0.09)	0.32	0.32	(5.51)	(5.63)	(1.34)	(1.34)
Other Skill	(2.37)	(2.36)	(2.76)	(2.71)	(3.20)	(3.22)	(1.73)	(1.73)
<u>Region</u>								
MidAtlantic		0.05		0.14		(0.39)		(0.50)
Midwest		0.44		0.59		(0.06)		(0.25)
Southeast		0.29		(0.68)		(0.43)		(1.73)
South Central		0.68		(0.48)		0.65		(1.68)
West		(0.30)		0.09		(1.20)		(0.18)

**Source:** Information collected, calculated and compiled by James Curtis Jr (2002); IPUMS; Dependent variable is natural log of total wealth adjusted for regional prices; Estimated parameters in bold are statistically significant with a 95 percent level of confidence. Farmers and Northeast are the excluded variables.



611

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792 THE APPENDIX

793

794 Several anecdotal studies on free blacks in the labor market show that the poor legal and social conditions made it difficult for free  
795 blacks to be economically competitive. For instance, free blacks had to compete with slaves, whites and immigrants for employment.

796 "The preference of employers for white or slave labor forced free Negroes to underbid whites and work on the same  
797 terms as slaves. By accepting lower wages and longer hours, many free Negroes found employment, but they aroused the  
798 ire of white workingmen, who complained that free Negroes depressed their standard of living" (Berlin, p.229).  
799 Immigration put free Negroes in the same position: "The influx of Irish and German workers...speeded the exclusion of  
800 Negro freeman from many occupations. The competition free Negro workers faced from newly arrived immigrants in  
801 Baltimore was a typical example of how white immigrants limited the free Negro's opportunities" (p.231).  
802

803 They tended to earn wages and income that were much less than whites. One local study shows that: "Racial prejudice relegated  
804 many free Negro workers to the meanest drudgery at the lowest pay...Even at these low levels of employment, free Negroes were  
805 often paid less than whites. The standard wage for day laborers in the Norfolk shipyards (for example) was one dollar, but free  
806 Negro workers rarely earned more than seventy-five cents a day" (Berlin, p.227).

807

808 But studying racial differences in factor market supply decisions and prices, as reflected in the literature on labor supply, wages and  
809 income, presents only a subset of the factors that determine the accumulation and storage of assets over the lifetime of black and  
810 white households. Therefore, this study will focus on differences in wealth between blacks and whites in the middle of the 19<sup>th</sup>  
811 Century.

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817 **Related Studies: A Review of the Literature on the Study of Free Blacks**

818

819 The source of antebellum free black–white wealth differences has not studied. Researchers (e.g., Bodenhorn (1999), Eggert  
820 (1997), Hershberg (1997), Berlin (1974), Litwick (1961), Jackson (1939), and DuBois (1899)) and Philadelphia  
821 abolitionist society studies in 1849 and 1838 attempted to address free black–white wealth differences often using a piece–mill  
822 approach. Foremost, Leon Litwick (1961) and Ira Berlin (1979) provided a historical account for experience of northern and  
823 southern free blacks, respectively. After surveying past research efforts, compiling county records and compiling census manuscripts,  
824 Berlin found that free blacks in several states possessed more property over time. But these results are obscured by the aggregate  
825 measures of wealth. For instance, he found that the aggregate wealth of free blacks living in fifteen counties in Georgia nearly  
826 doubled between 1850 and 1860. But we do not know why their wealth increased because correlations with explanatory  
827 variables were not calculated.

828

829 Luther Jackson (1939) also analyzed the property and real estate wealth of free blacks in the South. He used tax books, deeds,  
830 orders, legislative petitions, agricultural manuscripts and census manuscripts from Virginia to show that the amount of property held  
831 by free blacks in 1830 tripled by 1860. Even though Jackson provided a brief statistical analysis, the inference of his study is  
832 limited to Virginia and he did not employ methods to explain what drove his observations.

833

834 Bodenhorn (1999a) used 1860 US census data to analyze southern wealth differences among darker and lighter free blacks.  
835 Based on censored quantile regression results using data from Maryland, Virginia, North Carolina, Kentucky and Louisiana, mulattos  
836 had wealth advantage to darker free blacks. Similarly, Bodenhorn (1999b) employs data stature of darker and lighter free blacks.  
837 He also found that mulattos had an advantage to darker free blacks when analyzing stature data from Virginia. While Bodenhorn did  
838 employed modern statistical analyses, inference from this study is limited to several states.

839



840 Some research has also been conducted on free black wealth in localities within Pennsylvania. Gerald Eggert (1997) linked US  
841 Census records of blacks in Harrisburg, Pennsylvania from 1850-60 to estimate property values of free blacks. He found stagnant  
842 wealth among a large percentage of the population but growth among those who did not migrate. However, his study did not  
843 compare results to migrants and was limited to one locality. Theodore Hershberg (1997) employed abolition society data on the  
844 socioeconomic conditions of free blacks in Philadelphia to show that real and personal wealth fell ten percent between 1838 and  
845 1847.

846  
847 Similarly, W. E. B. Dubois (1899) used these records and tax receipts to show that free blacks in Philadelphia often held less  
848 property than whites. However, Hershberg and Dubois do not use the analytical tools needed to fully explain their results. Their  
849 studies lack a full description of the data collection procedures in their research. To analyze the link between these social conditions  
850 and economic outcomes of free blacks, I employ wealth and cross-sectional variables from the 1850, 1860 and 1870  
851 Integrated Public Use Microdata Samples (IPUMS).

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854 **Descriptive Statistics: An Analysis of the IPUMS Data Employed for the Study of the Economic Condition of Free**  
855 **Blacks in United States of America, Compared to Ex-slaves and White Americans**

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858 This study uses data from the Integrated Public Use Microdata Sample (IPUMS). IPUMS data are based on national representative  
859 samples and supplemental over-samples of minorities from the population schedules of the US census manuscripts. The US  
860 conducted its first census in 1790 and its first modern census in 1850. By 1850, the census had improved such that we can  
861 now investigate the past with new insights. Modern census data is a rich set of cross-sectional, individual-level data on American  
862 families and individuals.

863 Magnuson (1995a) and Steckel (1991) recommend that researchers pay careful attention to enumeration the  
864 procedures before investigating this data. Magnuson reports that the U.S. Census is not a “pure reflection of general  
865 societal trends”(p. 11). The census is composed of questions, which have and have not persisted over time. Between  
866 1790 and 1840, the unit of enumeration was the household, based on given set of characteristics, i.e. Colored-Male-  
867 Over Age 16. The 1850 U.S. Census was considered the first modern Census when the unit was changed to the  
868 individual. Magnuson also noted that a proposed slave schedule would have collected extensive information on the  
869 ancestors of modern-day African Americas. In 1840, Congress formed the Census Board that unsuccessfully  
870 recommended a slave schedule for the 1850 U.S. Census--which would have included the names of slaves, birthplace  
871 of slaves and number of children (Magnuson 1995a, p.19).

872  
873 Steckel reminds us that the original purpose of the US census was for taxation and US House of Representatives  
874 appropriations. However, a “growing desire for statistical information, curiosity about society, and heightened interest in  
875 international and regional comparisons led to expanded collection by the federal census” (Steckel 1991, pp.582-83).  
876 Steckel suggested that the likelihood of error increases as early census data is more disaggregated. He noted that under-  
877 enumeration, over-enumeration and misreporting are errors that affect the quality of census data and led to the creation  
878 of the Census Bureau. Some of these errors may be attributed to the poor training of early enumerators and lower quality  
879 of early census administration. He found that larger households, lower-educated persons and persons with poor English-  
880 language skills tended to be omitted from the census. Steckel (1991) provided several examples of underenumeration in  
881 census data collected on blacks. He recommended using census comparisons, census matching, and consistency checks to  
882 evaluate errors and improve the quality of samples from the early census.  
883

884 This study analyzes US census samples from the 1850-70. These census manuscripts contain responses to important  
885 socioeconomic inquiries including age, sex, color, marriage status, literacy, whether the individual attended school during the year,  
886 occupation, state or country of birth, value of real estate, and value of personal estate (1860 and 1870 only).

887 Real estate value was enumerated based on guidelines specified in the Circular to Marshals. It specified that “under  
888 heading 8 insert the value of real estate owned by each individual enumerated. You are to obtain the value of real estate  
889 by inquiry of each individual who was supposed to own real estate, be the same located where it may, and insert the



890 amount in dollars. No abatement of the value is to be made on account of any lien or encumbrance thereon in the nature  
891 of debt" (Magnuson 1995b, p347) Personal estate value was also enumerated based on guidelines that specified  
892 "Personal estate is to be inclusive of all bonds, stocks, mortgages, notes, live stock, plate, jewels, or furniture, but exclusive  
893 of wearing apparel" (p.349)  
894

895 Economists have conducted an extensive amount of research based on national samples from the early US census manuscripts (see  
896 e.g. Ferrie 1999, 1994; Steckel 1990; Becker and Tomes 1986 and Soltow 1975, 1972). The sample studied in this paper  
897 was restricted to heads of households. Investigating the wealth from a random sample of household heads is more productive than  
898 investigating a random sample of individuals. Wealth is often used to purchase durable goods and durables are more likely to benefit  
899 the entire household rather than one individual in a household. Furthermore, census enumerators tended to sum up the wealth of a  
900 household and report it under the head of household. The final sample includes a 1-in-100 random sample from the 1850-70  
901 censuses and supplemental samples of 1-in-50 blacks in 1860 and 1870. The racial breakdown of the pooled sample is 21,416  
902 blacks and 154,569 whites.

903 Prior to 1865, blacks were not only stratified by skin color--black and mulatto--but they also functioned based on  
904 heterogeneous legal rights. Blacks were either bounded in slavery or free, contingent on appropriate documentation. The  
905 1850 and 1860 IPUMS samples only include free blacks. As reported earlier, no detailed individual-level data is  
906 available on slaves. Thus, averages of wealth and property holding in the descriptive statistics were weighted based on (i)  
907 the size of the free black population relative to slave population in 1850 and 1860 and (ii) the assumption that slaves  
908 had no personal and real estate. Blacks were 15.7 percent of the US population in 1850 and 14.2 percent of the  
909 population in 1860 (Cramer 1997). But free blacks represented 11.9 percent and 11.0 percent of the black  
910 population, respectively. The unweighted averages in 1850 and 1860 represent the experience of (i) the average free  
911 black and (ii) the average black if slaves were freed earlier.

912  
913 The decade before the Civil War was a ripe environment for economic prosperity. Thomas Weiss (1992) found that  
914 Gross Domestic Product (GDP) grew by 1.96 percent between 1850 and 1860--higher than any other decade in the  
915 pre-war era. He suggested that although perishable output and shelter were the primary components of the gain, residual  
916 output also increased significantly. The residual was "the portion of output beyond apparent basic necessities...this was the  
917 output needed for industrialization, and of course provided as well the discretionary items that are the fruits of economic  
918 progress. In this light, Americans were advancing in style" (Gallman, p.30).  
919

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923

924 The decade immediately before the Civil War was a ripe environment for economic prosperity among free blacks.

925 “The industrial revolution in the United States was well underway by the 1850’s but the end points of the time period  
 926 were not marked by unusual prosperity or depression. Gold discoveries and growing agricultural exports to Europe  
 927 contributed to economic growth from the late 1840’s to the middle of the decade. The upswing was halted by the  
 928 Panic of 1857, a financial convulsion from which recovery was substantially complete by 1860” (Steckel 1990,  
 929 p.374).

930

931 After making state-level adjustments to agricultural labor force, Weiss (1992) found the growth of Gross Domestic Product (GDP)

932 was higher in the decade before the Civil War than any other decade in the period. Table 7b shows that perishable output and

933 shelter were the primary components of the gain. But the residual increased significantly. The residual was “the portion output

934 beyond apparent basic necessities...this was the output needed for industrialization, and of course provided as well the discretionary

935 items that are the fruits of economic progress. In this light, Americans were advancing in style” (Galman, p.30).

936

937 **Table 7a. Average Annualized Rates of Growth of Per Capita Gross Domestic Product and Components (1840 Prices)**

938

Decade	Growth in GDP	Perishable Output	Non-Perishable Output			
			Shelter	Home Manufacturing	Farm Improvements	Residual
1800-10	0.52	0.24	0.53	-0.03	1.80	1.16
1810-20	0.27	0.00	0.83	-0.01	-0.63	0.85
1820-30	0.72	0.23	2.16	-0.16	-1.01	1.65
1830-40	1.15	0.22	2.20	-0.46	-0.70	2.74
1840-50	0.93	0.44	-0.75	0.42	0.81	2.02
1850-60	1.96	1.58	0.96	-0.41	-2.12	3.10

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950 **Source:** Information collected and compiled by James Curtis Jr (2002) from Gallman (p. 31)

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954 Tables 7b-1, 7c-2 and 7d-3 describe the means of the variables in the IPUMS sample:

955 **Table 7b-1. The Sample Means of the IPUMS Data, 1850 through 1870**

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Race:	Black					White			Overall		
	1850		1860		1870	1850	1860	1870	1850	1860	1870
	Free	All	Free	All	All						
<b>Wealth Variables</b>											
Personal Estate			208	(23)	53		1,404	1,112		1,363	880
Real Estate	171	(20)	277	(30)	71	1,336	1,975	2,436	1,311	1,916	1,919
Total Estate			484	(53)	124		3,379	3,548		3,280	2,799
Price-Adjusted Personal Estate			215	(24)	34		1,506	741		1,462	586
Price-Adjusted Real Estate	189	(22)	286	(31)	47	1,486	2,050	1,643	1,458	1,990	1,294
Price-Adjusted Total Estate			501	(55)	81		3,556	2,384		3,452	1,880
Personal Estate > 0			0.551	(0.061)	0.211		0.811	0.703		0.801	0.595
Real Estate > 0	0.194	(0.023)	0.245	(0.027)	0.067	0.531	0.557	0.546	0.524	0.546	0.441
Total Estate > 0			0.585	(0.064)	0.235		0.838	0.758		0.829	0.643
Farm ownership	0.114	(0.014)	0.119	(0.013)	0.194	0.506	0.445	0.410	0.498	0.434	0.363
<b>Wealth Ratio (to Whites)</b>											
Personal Estate			0.148	(0.016)	0.048					0.97	0.79
Real Estate	0.128	(0.015)	0.140	(0.015)	0.029				0.98	0.97	0.79
Total Estate			0.143	(0.016)	0.035					0.97	0.79
Price-Adjusted Personal Estate			0.143	(0.016)	0.046					0.97	0.79
Price-Adjusted Real Estate	0.127	(0.015)	0.139	(0.015)	0.029				0.98	0.97	0.79
Price-Adjusted Total Estate			0.141	(0.015)	0.034					0.97	0.79
Personal Estate > 0			0.679	(0.075)	0.300					0.99	0.85
Real Estate > 0	0.366	(0.043)	0.440	(0.048)	0.122				0.99	0.98	0.81
Total Estate > 0			0.698	(0.077)	0.310					0.99	0.85
Farm ownership	0.225	(0.027)	0.267	(0.029)	0.473				0.98	0.98	0.88
<b>Race Variables</b>											
Black	1.000		1.000		1.000	-	-	-	0.022	0.032	0.217
Black	0.677		0.635		0.881	-	-	-	0.015	0.020	0.191
Mulatto	0.323		0.365		0.119	-	-	-	0.007	0.012	0.026
White	-		-		-	1.000	1.000	1.000	0.978	0.968	0.781
Other	-		-		-	-	-	-	-	0.002	0.002
Chinese	-		-		-	-	-	-	-	0.001	0.001
Indian	-		-		-	-	-	-	-	0.001	0.001
<b>Schooling Variables</b>											
Literacy	0.527		0.583		0.146	0.903	0.913	0.885	0.895	0.902	0.724
<b>Occupation Variables</b>											
Labor Force Participation	0.656		0.823		0.890	0.873	0.910	0.887	0.868	0.907	0.888
Unskilled	0.371		0.509		0.705	0.100	0.146	0.230	0.106	0.158	0.333
Skilled	0.166		0.191		0.071	0.218	0.233	0.227	0.217	0.232	0.193
White-Collar	0.018		0.019		0.009	0.085	0.107	0.119	0.083	0.104	0.095
Farmer	0.107		0.112		0.187	0.475	0.431	0.395	0.467	0.420	0.349
Student or Retired	-		0.001		0.000	0.000	0.002	0.009	0.000	0.002	0.007
Other	0.338		0.167		0.027	0.122	0.082	0.020	0.127	0.085	0.022

Source: Information collected, calculated and compiled by James Curtis Jr (2002); IPUMS





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**Table 7b-2. The Sample Means of the IPUMS Data, 1850 through 1870**

Race:	Free Blacks			Whites			Overall		
Year:	1850	1860	1870	1850	1860	1870	1850	1860	1870
<b>Demographic Variables</b>									
Male	0.750	0.727	0.820	0.910	0.908	0.893	0.907	0.902	0.877
Number of persons in the household	4.581	4.684	4.705	5.532	5.267	5.166	5.511	5.247	5.064
Number of families in the household	1.295	1.263	1.194	1.382	1.354	1.371	1.380	1.352	1.335
Married	0.639	0.613	0.716	0.830	0.822	0.818	0.826	0.814	0.794
Number of children > 0	0.688	0.715	0.746	0.818	0.810	0.804	0.815	0.806	0.790
Number of children	2.023	2.117	2.233	2.819	2.619	2.504	2.802	2.600	2.442
Number of children under 5 years old	0.589	0.553	0.682	0.752	0.750	0.662	0.748	0.742	0.665
Youngest child	4.916	5.675	4.413	5.239	5.173	5.750	5.232	5.187	5.452
Oldest child	9.366	10.521	9.462	11.372	10.852	11.317	11.328	10.834	10.899
Age	42.450	42.890	39.839	41.525	41.384	42.806	41.546	41.424	42.146
< 20 years old	0.009	0.007	0.018	0.003	0.004	0.004	0.003	0.004	0.007
20-29 years old	0.182	0.176	0.258	0.197	0.195	0.172	0.197	0.194	0.191
30-39 years old	0.274	0.254	0.248	0.301	0.304	0.276	0.300	0.302	0.270
40-49 years old	0.225	0.244	0.214	0.231	0.233	0.243	0.231	0.233	0.236
50-59 years old	0.171	0.170	0.146	0.149	0.151	0.172	0.149	0.151	0.166
60-69 years old	0.085	0.093	0.080	0.082	0.080	0.093	0.082	0.080	0.090
70-79 years old	0.035	0.035	0.026	0.029	0.027	0.033	0.029	0.028	0.032
80-89 years old	0.009	0.018	0.007	0.007	0.006	0.006	0.007	0.006	0.006
90+ years old	0.009	0.004	0.003	0.001	0.001	0.000	0.001	0.001	0.001
<b>Region Variables</b>									
Rural	0.621	0.615	0.863	0.802	0.753	0.718	0.798	0.749	0.749
Metropolitan area	0.224	0.258	0.066	0.122	0.172	0.196	0.125	0.175	0.168
Slave state	0.528	0.525	0.908	0.286	0.255	0.249	0.291	0.263	0.391
Northeast	0.054	0.050	0.006	0.145	0.121	0.106	0.143	0.118	0.084
Mid-Atlantic	0.304	0.253	0.033	0.293	0.276	0.252	0.293	0.275	0.204
Midwest	0.113	0.153	0.052	0.263	0.320	0.361	0.260	0.314	0.294
Southeast	0.493	0.474	0.747	0.256	0.215	0.208	0.261	0.223	0.324
Southwest	0.035	0.050	0.161	0.031	0.040	0.041	0.031	0.040	0.067
West	0.001	0.019	0.002	0.012	0.028	0.032	0.012	0.030	0.027
Moved to Northeast	0.023	0.023	0.003	0.023	0.029	0.031	0.023	0.029	0.025
Moved to Mid-Atlantic	0.097	0.079	0.012	0.106	0.117	0.109	0.106	0.116	0.088
Moved to Midwest	0.102	0.118	0.037	0.210	0.244	0.251	0.208	0.239	0.204
Moved to Southwest	0.010	0.013	0.102	0.026	0.033	0.033	0.026	0.033	0.048
Moved to Southeast	0.006	0.006	0.006	0.025	0.026	0.027	0.025	0.025	0.023
Moved to West	0.001	0.016	0.002	0.009	0.025	0.029	0.009	0.025	0.024
Stayed in Northeast	0.031	0.028	0.003	0.123	0.092	0.075	0.121	0.089	0.059
Stayed in Mid-Atlantic	0.207	0.174	0.021	0.187	0.158	0.144	0.188	0.158	0.117
Stayed in Midwest	0.010	0.035	0.015	0.053	0.076	0.110	0.052	0.075	0.090
Stayed in Southwest	0.025	0.038	0.058	0.005	0.006	0.008	0.005	0.007	0.019
Stayed in Southeast	0.486	0.469	0.741	0.230	0.190	0.180	0.236	0.198	0.302
Stayed in West	-	0.002	0.000	0.004	0.004	0.003	0.004	0.005	0.003

**Source:** Information collected, calculated and compiled by James Curtis Jr (2002); IPUMS



**Table 7b-3. The Sample Means of the IPUMS Data, 1850 through 1870**

Race:	Free Blacks			Whites			Overall		
Year:	1850	1860	1870	1850	1860	1870	1850	1860	1870
<b>Region Variables (continued)</b>									
Migrated to a different state	0.340	0.343	0.359	0.545	0.594	0.597	0.540	0.586	0.546
Migrated to a different region	0.241	0.255	0.162	0.398	0.474	0.479	0.395	0.467	0.411
Born in Northeast	0.035	0.038	0.004	0.174	0.134	0.108	0.171	0.130	0.085
Born in Mid-Atlantic	0.225	0.197	0.024	0.266	0.242	0.223	0.265	0.240	0.179
Born in Midwest	0.012	0.037	0.020	0.058	0.084	0.120	0.057	0.083	0.099
Born in Southeast	0.682	0.669	0.886	0.325	0.274	0.254	0.333	0.286	0.391
Born in Southwest	0.026	0.041	0.063	0.005	0.007	0.009	0.006	0.008	0.021
Born in West	-	0.002	0.000	0.004	0.004	0.003	0.004	0.005	0.003
Born in other US Territory	0.001	0.001	0.000	0.001	0.000	0.000	0.001	0.000	0.000
Born in foreign country	0.019	0.015	0.002	0.168	0.256	0.282	0.165	0.248	0.222
<b>Price Index</b>									
Regional Price Index	88.45	93.53	158.32	90.15	97.46	149.86	90.11	97.34	151.69
Number of Observations	773	1,703	18,940	34,671	51,776	68,122	35,444	53,594	87,227

**Source:** Information collected, calculated and compiled by James Curtis Jr (2002); IPUMS

Five years after emancipation, blacks made gains in the total wealth. Total wealth includes the value of personal and other wealth.

The value of southern total estate was inflated by the value of slaves. Slave owners included the value of slaves in their personal estate.

On average, the value of black total wealth, adjusted by regional prices, was \$124 in 1870 while whites held \$3,548 in total estate. Total estate wealth grew by 47 percent between 1860 and 1870 among blacks while white total estate wealth fell 33 percent between 1860 and 1870. See the empirical results section for a complete discussion of black-white wealth differences.

Black-white differences in schooling and employment were also quite large in 1870. 14.6 percent of the black population was literate while 88.5 percent of the white population could read and write. While 89 percent of both, blacks and whites, were





1097 employed, occupation concentrations were different. In 1870, 70.5 percent of blacks had unskilled jobs, compared to 23 percent  
1098 of whites. In contrast, 18.8 percent of blacks were either white-collar workers or farmers, compared to 53.8 percent of whites.

1099 White occupational concentrations changed quite dramatically between 1850 and 1870. The portion of white unskilled  
1100 workers grew 46.2 percent between 1850 and 1860 and 57.3 percent between 1860 and 1870 while the portion  
1101 of white-collar worker grew less dramatically during this period. The portion of white-collar workers grew 25.8 percent  
1102 between 1850 and 1860 and 12.1 percent between 1860 and 1870. Simultaneously, the portion of white farmers  
1103 fell 9.3 percent between 1850 and 1860 and 8.4 percent between 1860 and 1870. Naturally, this coincided with a  
1104 continual decline in farm ownership among whites over the twenty-year period.  
1105

1106 Blacks and whites were also different demographically in 1870. 18 percent of black households had female heads while only 10.7  
1107 percent of white households had female heads. Similarly, only 71.6 percent of black household heads were married while 81.8  
1108 percent of white household heads were married. White households also had more residents, including children. Furthermore, the  
1109 average age of the white household head, youngest child and oldest child is older than the average ages of the black household  
1110 head, youngest child and oldest child, respectively. White demographics gradually changed over the twenty-year period. The number  
1111 of persons in a household, number households with children and number of children all fell. Simultaneously, the number of white  
1112 male and white married household heads fell. Among free blacks, the proportion that was male and married also fell between  
1113 1850 and 1860.

1114  
1115 Regional differences were also quite large in 1870. The only dramatic regional differences among whites prior to 1870 were  
1116 changes in the western and foreign-born population. 12 percent of whites lived in west in 1850. This portion of the population  
1117 grew by 129 percent between 1850 and 1860 and 12 percent between 1860 and 1870. Additionally, Joseph Ferrie reports  
1118 that the portion of white foreign-born population grew by 52 percent between 1850 and 1860 and 10 percent between  
1119 1860 and 1870 (1999). 1850 and 1860 free blacks were regionally different than whites and all blacks in 1870. Only  
1120 one-in-two free blacks lived in slave states, with the remaining plurality living in the Mid-Atlantic. More than one-in-three free  
1121 blacks lived in urban areas between 1850 and 1860—significantly larger than whites and all blacks in 1870. One-in-three free  
1122 blacks were also born outside of the southeast region in 1850 and 1860. Furthermore, 34 percent of free blacks migrated to a



1123 different state in 1850 and 1860 and over seventy percent of these migrants migrated to a new region. Only one-in-four whites  
1124 lived in former slave states while nine out of ten blacks lived in former slave states. As a result blacks were more likely to live in  
1125 rural areas than blacks (86.3 percent of blacks to 71.8 percent of whites). This occurred because whites were more regionally  
1126 mobile than blacks. 35.9 percent of blacks migrated from their birth state and 45 percent these migrants reside in a new region.  
1127 However, 59.7 percent of whites migrated from their birth state and 80 percent of these migrants changed regions. The key  
1128 regional difference may be that only 11.4 percent of blacks were born outside the Southeast while the largest birth segment among  
1129 whites was foreign-born (28.2 percent). Joseph Ferrie conducts a thorough analysis of the immigrant experience during this  
1130 period (1999).

1131  
1132 Five years after emancipation, blacks, on average, held \$71 in real estate wealth while whites held \$2,437. These estimates are  
1133 consistent with the estimates of Soltow (1972; 1975). Although Soltow (1972) only collected a sample of 393 non-whites in  
1134 1870, he found their average wealth was \$73, compared to \$2,661 among whites. Soltow (1975) found similar differences in  
1135 free black and white wealth using a sample of 151 blacks. He conducted one of the first in-depth studies of mid-nineteenth  
1136 century wealth accumulation patterns using the census population schedules. Note that these schedules were originally are stored on  
1137 microfilms. He spun the microfilm half-turns to collect random, cross-sectional samples from 1850-1870. He found that  
1138 average black wealth in 1870 was \$74 while average white wealth in \$2,691.

1139  
1140 Given that blacks held only 2.9 percent of the average white real estate wealth in 1870--up from the 1.5 percent in 1850  
1141 and 1860, the fact that the growth of real estate wealth favored blacks over this time period may not be surprising. Among blacks,  
1142 average real estate wealth, adjusted by regional prices, grew by 28 percent between 1850 and 1860 and 33 percent between  
1143 1860 and 1870. Among whites, price adjusted real estate wealth also grew by 28 percent between 1850 and 1860 but fell  
1144 by 25 percent between 1860 and 1870. This white wealth recession was primarily due to the losses incurred by the southern  
1145 whites after the Civil War.



1146

1147 Property-holding patterns were similar to real estate wealth patterns. Only 6.7 percent of blacks in 1870 held property (or a  
1148 positive value of real estate wealth) while 54.6 percent of whites held property in 1870. The growth in black property-holders  
1149 outpaced the growth of black real estate wealth. Blacks property holders grew 17 percent between 1850 and 1860 and 148  
1150 percent between 1860 and 1870. Among whites, property holders grew by five percent between 1850 and 1860 and fell two  
1151 percent between 1860 and 1870. Overall, the ratio of black to white property holders was 12.2 percent in 1870, up from 4.3  
1152 percent in 1850 and 4.8 percent in 1860.

1153

1154 Blacks made similar gains in the total estate. Total estate includes the value of personal estate and real estate. The value of southern  
1155 total estate was inflated by the value of slaves. Slave owners included the value of slaves in their personal estate. On average, the  
1156 value of black total estate wealth, adjusted by regional prices, was \$124 in 1870 while whites held \$3,548 in total estate. Total  
1157 estate wealth grew by 47 percent between 1860 and 1870 among blacks while white total estate wealth fell 33 percent  
1158 between 1860 and 1870. Black total estate holders (or blacks possessing a positive value of total estate wealth) grew by 265  
1159 percent to 23.5 percent in 1870 while white total estate holders fell by 9.6 percent to 75.8 percent in 1870. Overall, the ratio  
1160 of black to white total estate wealth was 3.5 percent while the ratio of black to white total estate holders was 31 percent in 1870.  
1161 These descriptive statistics document the general improvements in the condition of the average black relative to the average white  
1162 after the abolition of slavery.

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