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Volume Author/Editor: Claudia Goldin and Hugh Rockoff, editors

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Chapter Author: Claudia Goldin, Hugh Rockoff

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Introduction

Claudia Goldin and Hugh Rockoff

The essays on American economic history that constitute this volume were presented at a National Bureau of Economic Research–Development of the American Economy (NBER-DAE) conference held March 2–3, 1991 in Cambridge, Massachusetts. The conference had two purposes. One was to bring together research on the implications of expanding markets in labor and capital during the nineteenth century. Another was to honor the individual who, in 1978, founded the DAE within the NBER and was mentor to most of the participants. Those he had not advised were the co-authors of his students or are now his grand-students. With few exceptions the authors employ a methodology pioneered by Robert Fogel—the use of large-scale cross-sectional and longitudinal data sets culled from original sources—to answer questions of current policy interest and of historical relevance. The data used include family genealogies, the U.S. federal population census manuscripts, the manufacturing census manuscripts, manumission records, firm accounts, army personnel records for civilian hires, certificates of freedom for ex-slaves, probate records for the thirteen colonies, farmers' account books, bank balance sheets, and a novel qualitative source—the slave narratives from the Work Projects Administration and Fisk University collections.

The topics covered reflect not only the methodology of Robert Fogel but also the subjects that interest him. This may not be surprising since several of the papers come from dissertations written under his supervision. But that is not what accounts for the similarity. Fogel encourages each of his students to find a dissertation topic they can live wih ("a dissertation is like a marriage," he has frequently remarked). He fosters excellence, scholarship, and relevance, never imitation. Rather, the topics often reflect his concerns because of his powerful influence as a scholar. The topics that interest Fogel soon become of interest to those in the profession. Thus the collection includes papers on railroads, slavery, demography, and political economy—the topics that have been, or are soon to be, those for which he is best known. We have borrowed the title for the volume from the graduate course Fogel offered generations of students at Chicago, Rochester, and Harvard.

Collectively the papers address the issues of market integration and its impact on the lives of Americans. Many of the papers consider the extent to which integration was achieved in labor and capital markets during the nineteenth century (Goldin and Margo; Sokoloff and Villaflor; Rothenberg; Bodenhorn and Rockoff; Bordo, Rappoport, and Schwartz). Another group focuses on how the extent and functioning of these markets affected the lives, material existence, fertility, mortality, and nutritional status of Americans, black and white (Pope; Steckel; Wahl; Komlos; Crawford). Several address how non-market collective action, in the form of government and unions, altered the results of the market mechanism (Carlos and Lewis; Friedman; Reid and Kurth). Inequality in economic condition is highlighted in several papers—for example, those on labor markets (Goldin and Margo; Sokoloff and Villaflor; Yang), as well as those on wealth (Galenson and Pope; Jones).

How did the extension of markets affect individuals? Richard H. Steckel's piece explores the intriguing possibility that Americans reduced their fertility as financial markets expanded, and in Jenny Bourne Wahl's we see that fertility declined as couples were more able to produce "higher quality" children. Stephen Crawford finds that the size of a plantation affected the structure of the slave family. Nutritional status and life expectation, according to John Komlos and Clayne L. Pope in separate contributions, decreased sometime during the nineteenth century even as markets were expanding. Komlos argues that it was precisely this market expansion that had negative consequences for certain groups. Migration, according to Pope's genealogical data, diminished the life expectation of women. David W. Galenson and Clayne L. Pope find that early arrival in an area, reinforced by increases in population and thus the extension of markets, enhanced the wealth of individuals. Finally, Winifred B. Rothenberg shows that the expansion of labor markets within the agricultural and manufacturing sectors fostered long-term contracts between farmers and farm laborers. Thus we see that the integration of both capital and labor markets in the nineteenth century had a wide range of effects on Americans.

The ordering of the papers reflects the consideration and development of the theme by the various authors. The evolution of markets in agricultural and manufacturing labor is considered first; that concerning capital and credit is featured next. The impact of markets on individual outcomes is the subject of the third section, and the final group of papers examines the extra-market institutions of governments and unions.

Labor Markets in Manufacturing and Agriculture

Industrialization in the Northeast, from 1820 to 1860, greatly altered the demand for labor, and Kenneth L. Sokoloff and Georgia C. Villaflor assess which laborers gained from market expansion during early industrialization. They find, using various manufacturing census manuscript sources, that all discernable segments of the industrial labor force in the Northeast realized substantial real wage gains over the thirty-year period and that wage differentials between groups (by skill, by firm size, by geographic place) narrowed as markets expanded. Around a rising trend in real wages, however, were occasional downturns attributable primarily to supply-side shocks originating in the agricultural sector and immigration flows. Claudia Goldin and Robert A. Margo examine labor markets during the same period to assess their flexibility by analyzing the persistence of shocks to the real wage. The flexibility of wages determines the distributive consequences of economic upturns and downturns. If nominal wages are somewhat rigid, then deflations will be accompanied by unemployment for some workers but real wage increases for those fortunate enough to retain their jobs. Inflations, however, will involve real wage losses. Shocks, they find, did not have persistent effects on real wages but did take about five years to run their course. Because their source is the civilian payroll of the military, they can assess differences across region and by occupation for laborers, artisans, and clerks. The persistence of shocks differed by occupation (greatest in clerical jobs and least in agriculture) and by region (least in the growing region of the Midwest). The nonagricultural wage laborer in antebellum America, therefore, was likely to have had a greatly enhanced probability of unemployment during economic downturns and price deflations. Thus there may have been important distributive consequences to shocks to the economy before the Civil War.

Winifred B. Rothenberg examines the reasons for, and the consequences of, the rise of contract labor in agriculture during the century preceding the Civil War. Agricultural labor, as revealed in farmers' account books, was once primarily paid by the day. But increasingly over the nineteenth century, laborer and farmer became partners in a mutually beneficial long-term arrangement—an explicit contract binding the two for several months, a season, or a number of seasons. Day labor had often been provided by friends, while contract labor was frequently that of immigrants and other strangers. Increased immigration, the need for room and board, and the less seasonal demand for labor as farmers relied more on livestock and less on grains encouraged the use of contract labor. It was a market response that may have contributed to increased agricultural productivity in the early nineteenth century.

Donghyu Yang also addresses the causes and consequences of contractual form in agriculture. Using data from the manuscripts of the 1860 census of agriculture, he shows that tenants in the North were younger and poorer than owner-operators, suggesting that tenancy was a rung on the agricultural ladder culminating in ownership. But a closer look at the data reveals that this life-cycle depiction is accurate only for the North Central region. In the Northeast, on the other hand, farmers on the lower rung of the ladder were increasingly lured away by rapidly growing industrial labor markets (the development explored in the Sokoloff and Villaflor paper) and the ready availability of land in the West. Yang also explores the productivity of tenant farmers. Economic theory has vacillated on whether tenant farmers are as productive as owner-operators. After holding constant numerous variables that influenced productivity, Yang finds that, in the North Central region, tenant farmers were less efficient than owner-operators, suggesting the existence of traditional Marshallian inefficiencies. In the Northeast, however, tenants were as productive as owner-operators, probably because supervision by owners counteracted any tendency towards inefficiency. The longer period over which agricultural institutions evolved in the Northeast, as brought out in Rothenberg's paper, may help account for regional differences in efficiency by tenure.

Markets in Capital and Credit

Economic historians have assembled considerable evidence that capital markets were not well integrated in the 1870s and 1880s, but they have had scarce knowledge of their functioning in the decades prior to the Civil War. Howard Bodenhorn and Hugh Rockoff explore whether capital markets were as imperfectly integrated before the Civil War as they were in the two decades after. The surprising answer is that short-term interest rates (rates of return to the earning assets of banks) across various regions were more similar to the rate found in New York City before 1860 than they were in the 1870s and 1880s. The Civil War, therefore, must have precipitated a divergence in rates, and various developments during the war—the establishment of the National Banking System, for one—must have impeded the reintegration of a national capital market. While the authors do not discuss in detail the reasons for the initial integration, it seems likely that part of the story concerns the network of correspondent banking relations that fed into the New York call loan market (also explored by Bordo, Rappoport, and Schwartz). The findings in the Bodenhorn and Rockoff paper provide critical evidence for other papers in this volume that hinge on the integration of capital markets in the antebellum period.

In a piece with considerable relevance for current debates among macroeconomists, Michael D. Bordo, Peter Rappoport, and Anna J. Schwartz ask whether bank credit rationing or the supply of money had a larger impact on the vicissitudes of the nineteenth century economy. The central issue is whether monetary phenomena are a key determinant of business cycle fluctuations or whether changes in the composition of bank lending are also important influences. They, therefore, explore reasons for the macroeconomic shocks that are largely treated as exogenous in other papers in this volume (e.g., Goldin and Margo; Sokoloff and Villaflor). The authors find evidence of an integrated national capital market in which excess funds moved through a network of correspondent banks to be invested in the New York call loan market. Fluctuations in bank lending appear to have been due mostly to fluctuations in call loans, with other loans (the most likely channel for bank credit rationing) quite stable over the business cycle. Once the distinction between call loans and other loans is taken into account, the credit rationing effect becomes negligible but monetary factors remain robust.

David W. Galenson and Clayne L. Pope ask how duration in an area affected wealth accumulation and how the "precedence rate" (the persistence rate divided by population growth), as they term it, affected rents to duration. In doing so, they also ask how market growth affected the fortunes of early arrivals as opposed to those who settled later. They find, in an analysis of individuals, that rents to duration were substantial and, in a related county-wide analysis, that these rents were largely due to precedence. Not only were the fortunes of settlers enhanced by their early arrival but they were further magnified by the later arrival of others, thus by expanding markets in labor and capital. The paper by Alice Hanson Jones is based on her unique set of colonial probate records. It was found among her papers which are held at the Columbia University Rare Book and Manuscript Library and was pieced together from various drafts by Boris Simkovich. Jones (with Simkovich) explores the fate of women in the colonial period through the lens of their wealth accumulation. Few women, it appears, held wealth in their own names, and those who did owned on average about half as much as did men. If a woman's husband was wealthy, she was generally provided for after his death. But the limited employment opportunities for women outside the home made it hard for most widows and unmarried women to maintain or increase their wealth.

The Demography of Free and Slave Populations

Five papers on the demography of free and slave populations clearly show the implications of expanding markets in labor and capital for the standard of living of the population. Clayne L. Pope addresses how the mortality experience of Americans changed across the nineteenth century and what levels of life expectation existed for men and women and for migrant and nonmigrant. He finds, using an extensive collection of genealogies, that mortality did not increase during the nineteenth century but, instead, cycled, first up and then down. That life expectation did not increase monotonically during a period of large-scale industrialization, urbanization, and immigration could mean that market expansion and income growth had unexpected consequences for the population. Further, women at age twenty had lower life expectations than did men, and women, but not men, were adversely affected by migration west. Thus, Pope's work clearly addresses how life expectation was affected by the expansion of markets. Not surprisingly for students of Simon Kuznets, market development may initially have made the distribution of labor's rewards more unequal.

In his exploration of the nutritional status of free blacks, John Komlos addresses a related aspect of the impact of market expansion, and his findings add further support to the notion that there were adverse consequences for many in the population. Using anthropometric data (heights by age) from the Maryland Certificates of Freedom (manumission records), he finds that sometime in the early nineteenth century this population of free blacks suffered a decrease in height and thus, by inference, a decline in nutritional status. This work reinforces previous research of Komlos on similar measures for the white population. Because free blacks in Maryland who were positioned closer to food sources were somewhat taller than those who were not, market expansion appears to have had detrimental effects on some individuals. Urbanization and income growth, therefore, may not have had a positive impact on the entire population of Americans in the early nineteenth century.

The family structure of slaves is examined by Stephen Crawford using the remembrances of aged blacks in the 1930s, freed by Emancipation some sixty years before. Two-parent families, on the same or nearby farms, were present for about two-thirds of all children, at least during their early lives, and these unions, perhaps not surprisingly, experienced higher fertility than female-headed families. Larger plantations had a greater percentage of two-parent families, but children in female-headed families do not appear to have been neglected. Ex-slaves who grew up in female-headed families did not recount more deprivation or abuse than did those in two-parent families. Two-parent families, therefore, enhanced the profits of masters through increased births. But the exigencies of market expansion in cotton led them to profit by moving plantations, thus dividing families when husband and wife lived on neighboring farms, and from selling individual children from parents, parents from children, and husbands from wives. Overall the narratives reveal both the strength of the slave family and its vulnerability.

Richard H. Steckel directly addresses how the expansion of the market affected the fertility of rural Americans between 1850 and 1860. Using a linked sample of rural households drawn from the 1850 and 1860 federal population manuscript censuses, he assesses various hypotheses offered to explain the nineteenth century fertility decline. He finds that the model accounting for the largest fraction of cross-sectional variation contains a variable proxying the degree of financial market development. The variable used measures the number of banks per person and could indicate that financial assets substituted for children as old-age security or, more likely, that various aspects of economic development (but not just land density) led parents to have fewer children. A related question—whether parents throughout the nineteenth century progressively substituted higher quality children for more, lower quality children—is posed and answered by Jenny Bourne Wahl. As markets in goods and factors expanded, as schooling costs decreased, and as the opportunities for married women outside the home (but not necessarily in the labor market) expanded, parents had fewer but higher quality children. The paper leans heavily on results that bear on the relationship between wealth and fertility that suggest that the quantity-quality model could have operated in the nineteenth century. The estimation, which nests the well-known bequest model, takes advantage of the richness of a three-generation linked sample from family genealogies.

Political Economy

Three papers look at the role of government in altering the allocation and distribution of resources. Ann M. Carlos and Frank Lewis address whether government subsidies to two Canadian railroads built in the 1850s—the Grand Trunk and the Great Western—made economic sense. The historical literature suggests that these railroads, although privately unprofitable, were socially profitable. The authors, through a careful study of company records, find that the Great Western was socially profitable and that a relatively small additional subsidy would have made it privately profitable as well. But they find that the Grand Trunk was probably socially as well as privately unprofitable. The form of the subsidies offered the railroads—loan guarantees—and the consequences have a depressingly up-to-date ring. While the Great Western received small amounts of limited guarantees, the Grand Trunk received considerable aid. Even though the initial guarantees to the Grand Trunk were limited, the bond offerings convinced many that the government's guarantee might be open-ended. The Grand Trunk was thus encouraged to issue large amounts of heavily discounted debt, contributing to its eventual failure. The government, in turn, felt compelled to bail out the railroad to preserve stability in the market for Canadian debt.

Explanations for the existence of patronage and its decline over time in large cities are examined by Joseph P. Reid, Jr., and Michael M. Kurth. Large-city governments altered their means of gaining votes depending on whether the electorate was heterogeneous or homogeneous, poorer or richer. Thus politically provided goods, individualized and tailored to the needs of a diverse immigrant population, expanded when immigrants were numerically important. As incomes grew and as the citizenry became more homogeneous, public goods flourished and patronage declined. Gerald Friedman provides a somewhat different, but complementary, framework to understand the relationship between market forces and collective action. He asks how governments won over the electorate when labor threatened to organize and become a powerful political force. Large-city governments managed to divide labor, win over a segment of the work force, and reduce the strength of the labor movement. According to Friedman, the building trades became favored by big-city governments and their wages were increased. They, in turn,—it is presumed—supported these governments and weakened the rest of the labor movement. Reid and Kurth would also add that big-city governments directly promoted the building trades through the construction of parks, museums, libraries, and the like. Government, therefore, managed to divide and conquer labor while placating the electorate with public goods.

The volume begins with two appreciations of Robert W. Fogel as co-author, colleague, and scholar by Stanley L. Engerman and Donald N. McCloskey. The essays are more than a collection of revealing, engaging, and humorous remembrances, although they are that too. The appreciations consider the purpose and significance of the methodology innovated by Fogel. The volume concludes with a listing of the dissertations supervised by Fogel and his publications.

Fogel continues to excite students at the University of Chicago to work under his supervision and with him on his projects. He has recently begun a project of enormous complexity and importance on the aging of the American population that may well be his finest. It combines the talents of economic historians, medical doctors, statisticians, and demographers, and is on as grand a scale as any in which he has been involved. He is also finishing a volume, *The Escape from Hunger and Early Death: Europe and America, 1750–2050,* and is writing another (with Enid M. Fogel) on his mentor, Simon Kuznets, and the rise of modern empirical economics. The pace, intensity, and importance of his research have remained undiminished over time.