HOW THE JACKSONIANS FAVORED INDUSTRIALIZATION

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IN TRADITIONAL AMERICAN HISTORIOGRAPHY the Jacksonians headed a coalition of farmers, planters, and (since Arthur Schlesinger, Jr.) workingmen that fought attempts of business interests to use the federal government to promote industrial growth. By refusing to renew the charter of the Second Bank of the United States, Andrew Jackson curtailed credit for businessmen and threw the currency into disarray. Jackson and his successors also curtailed the federal government's role in financing infrastructure (then called internal improvements) needed for manufacturing and urban growth. They fought for lower tariffs and eventually succeeded in passing the 1846 and 1857 tariff acts substantially reducing protection for important branches of American manufacturing such as cotton textiles. Leaving the regulation of banking to the states promoted wildcat banking and hence an unsound currency that made business payments among regions more uncertain as to real value. Making the public domain more accessible to farmers robbed industry of labor. The consequence is that industrial growth was slowed until the triumph of the Republican Party during the Civil War changed federal policies from those attacking to those supporting business.

This view is badly overdrawn and positively misleading at many points. It confuses the pecuniary interests of some antebellum businessmen with policies conducive to industrial growth. In fact, the Jacksonians did very well in laying the foundation for sound, sustainable growth of the manufacturing sector; or at least, they did not harm that growth as earlier historians had alleged.[1] This new view is based on research of the past 30 years, which needs to be integrated. The researchers were dealing in specialized, isolated problems, often with new quantitative methods, which makes for good scholarship but bad synthesis.

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BANKING

One prerequisite to industrialization is the development of a banking system that makes credit available in large amounts and issues a currency. Here, the indictment runs, the Jacksonians demolished the Second Bank of the United States and thereby deprived the American economy of a bank exercising some, but not all, of the functions of a modern central bank. As a consequence, wildcat banks mushroomed, currency was overissued, and the economy was subjected to output cycles of monetary origin. The Second Bank, it was argued, had checked excessive notes; once it was destroyed, banking excesses could and did flourish.

In the classic accounts of Bray Hammond and Arthur Schlesinger, Jr., these policies are treated almost exclusively in a political context.[2] These stories do bring out a central philosophical tenet of the Jacksonians: their extreme commitment to the tenets of laissez faire and their hostility to what we today call mixed public-private enterprises. But Hammond in particular emphasizes that the Jacksonians had much business support, in particular a restive Wall Street chafing under what it termed domination by State Street in Philadelphia where Nicholas Biddle of the Second Bank held sway. Other businessmen, in his account, resented state as well as federal restrictions on bank chartering and swelled the anti-Bank coalition. The Jacksonians had widely different opinions, also, on a proper monetary constitution. Some like Andrew Jackson himself and Sen. Thomas Hart Benton of Missouri wanted only gold and silver as means of payment and objected to all notes issued by banks as inflationary or involving forced redistribution of wealth from one to another group. These were perhaps the true agrarians. On the other hand, entrepreneurs wanted maximum possible access to bank credit and argued (when they did not ignore the point) that unregulated note issue by competitive, individual banks was desirable for two reasons. The United States was on the gold standard after all, so that banks overissuing notes (and by implication, deposits) would lose gold reserves as a consequence. If they ignored this lesson, they would fail and lose their stockholders' capital. The public also preferred notes to gold, so that notes were a costless method of supplying the public with currency and of economizing on imports of gold and silver for coinage.[3] And since opinions differed so widely among Jacksonians, they adopted different rules in different states. In New England, capital abundance and a satisfactory self-regulating system of bank control (the Suffolk system) induced the Jacksonians to leave banking alone. In New York, extrepreneurial thirsts for credit led to free banking, while Louisiana planters restricted banking to short-term credit and some Western states even experimented with prohibitions of note issues.

But matters that loom large in political history often have surprisingly little impact on economic growth and development, and this is no exception. For example, was wildcat banking so destructive of the value of money as Bray Hammond and a predecessor, Ralph Catterall, had charged? A new economic historian, Hugh Rockoff, measured the extent of destruction by a cross-section study of discounts of bank notes from par before 1860.[4] First, he used economic theory to construct a model that an efficient market in bank notes, created by brokers (note-shavers) who brought up notes in cities remote from points of issue in order to redeem them at the issuing point, would create quotations measuring for each bank the percentage discount of its notes from par. This published quotation data would also measure the extent of overissue, by the volume of transactions and the identity of banks with serious discounts from par. This enabled quantitative testing. The greater the wildcatting, the greater would be the discounts and the volume of transactions as well as the number of banks where discounts exceeded costs plus normal profit on redemption.

After laborious and careful calculation, Rockoff found that the Jacksonian advocates of free banking were right: overissue of notes was impossible for the banking system as a whole under gold standard rules. For in the aggregate, the depreciation of all notes issued by all banks was less than 2 percent of their combined face value. This is a far cry indeed from the "orgies" of excessive note issues often mentioned in the traditional history of the era! Apparently the gold standard worked reasonably well in the entire absence of Nicholas Biddle's forcing of redemption during the 1820s as chronicled by Bray Hammond.

Macroeconomic Performance

Of course, overissue of money by banks may not result in depreciation of notes of individual banks if all banks move together. In this case, the expansion of money supply generates automatically an expansion of the demand for money, as bank lending starts the familiar Keynesian sequence of rising investment and income. The traditional history asserts that the destruction of the Second Bank caused precisely this expansion of the money supply from 1832 to 1837, hence a boom. But the boom collapsed when prices had risen above the international level, causing the severe business contractions of 1837 and 1839. By implication, then, the preservation of the Second Bank would have avoided the slump by avoiding the preceding boom.

Here, consider the iconoclastic historian Peter Temin. In *The Jacksonian Economy*, Temin used his own research and that of Richard Timberlake, Douglas North, Hugh Rockoff, and others to conclude that the 1832–37 boom had nothing at all to do with the abolition of the Second Bank. Instead, it resulted from a wave of foreign investment in American securities that coincided with long-cycle peaks in the prices of American export goods, particularly cotton. Added to these igniting forces was an autonomous inflow of specie due to a substitution of bills of exchange on London for Mexican silver in satisfying the normal American and European deficits in the goods trade with China.

How did Temin reach this conclusion? His method was simple though powerful. If the forces igniting the boom were domestic monetary ones, we should have seen American banks, now freed of Second Bank supervision, diminishing their specie reserves relative to their notes and deposit liabilities as they overissued the latter two. But such a fall in aggregate specie/money ratios never occurred; in fact, ratios of specie to money liabilities remained just about constant or improved right up to the peak of the boom in 1836 and early 1837. Hence money behavior was passive, not active as the traditional history was implied. And if banks kept historically adequate reserves throughout, the Second Bank would have made no difference at all since its primitive form of central banking operated only to curtail a decline, not to force a rise, in this key ratio during a boom. (In addition, the Second Bank had never operated to counter flows of specie, only to police note issues.)

So the absence of the Second Bank made no difference to events. But others might charge, and have charged, that in a broader sense, the Jacksonian economy stands convicted of gross instability. Did it matter to the farmer losing his markets or the worker losing his job whether unstable banking or unstable investment was the culprit?

Here, Peter Temin concludes that, in fact, the instability of the American economy was very small *in real terms*. It is true that prices and wages first soared and then plummeted, but not real output and employment. Using Robert Gallman's figures, Temin demonstrated that real output of the American economy grew at a normal, or even above-normal, pace from the mid-1830s to the mid-1840s. Since prices were flexible downwards, the 1837 and 1839 crises were short and were succeeded by strong rebounds, avoiding anything remotely like the Great Depression of the 1930s. Speculators of all classes took a bath, but growth went on. Concerning income distribution, workers improved their real incomes as prices fell faster than wages after 1837. In a phrase, laissez faire worked when coupled with flexible prices and wages. Thus, any monetary instability (and the demise of the Second Bank of the United States did *not* seem to increase this) had minimal consequences for mass welfare. More work is needed to assess real as well as nominal swings in the American gross national product (GNP) after 1840, but the unpublished Gallman annual estimates of real GNP would appear to back up this conclusion for the entire 1832–1860 period when the Jacksonians were generally in power in Washington.

Protective Tariffs

According to conventional thinking (see many textbooks on economic development), high protective tariffs are highly desirable in a developing country for encouraging industrialization. After failures during the 1830s, the Jacksonians finally succeeded in bringing tariff rates down substantially in the 1846 Walker tariff act and the 1857 act. But did this slow down industrialization? Not according to a seminal study of New England cotton textiles by Paul David, "Learning by Doing."[5] In this and a later article, David found by econometric analysis that American cotton textiles did not need tariff protection to expand at just about the pace that it actually did with protection. Tariff protection is supposed to favor the establishment of industries that can compete in the long run by making it possible for infant firms to cover costs and make a profit during the initial period after founding when costs of production are abnormally high relative to their long-run level. But, asks David, why wouldn't private capitalists see the long-run profitability of such industries and hence be willing to subsidize immediate losses during the initial learning, high-cost period?

David then tested the tariff-infant industry argument as follows. If learning by doing (and hence reduction of production costs) was associated with output, there would be some backing for the infant industry argument for tariffs. For companies would have to produce in order to reduce costs, and to produce they would have to sell. But if learning-by-doing was associated solely with the passage of time, there is no argument for tariffs. Private capitalists could expect costs to fall regardless of sales; therefore they would be willing to invest as long as the discounted present value of profits in the more distant future exceeded the discounted present value of losses immediately after firms were founded.

David then applied econometric tests of these competing hypotheses and found that time, not cumulated output, explained cost reductions. Accordingly, the high tariffs prevailing from 1816 to 1846 were presumptively unnecessary for growth of the New England textile industry. By inference, therefore, the Jacksonian tariff reductions of 1847 and 1857, for cotton cloth, were not harmful to continued expansion of cotton textiles.[6] This conclusion is also supported by this writer's findings published in *New England Textiles of the 19th Century, Profits and Investment*. There was a very pronounced sag in profits per dollar of invested capital, for a sample of seven to eleven cotton textile companies with standardized accounting, during the 1850s. The decline also extended to a much larger sample showing dividends divided by market value of shares. Nevertheless, expansion of the industry did *not* decline during the 1850s, whether measured by number of spindles, yards of cloth, or pounds of output. By inference, therefore, protective tariffs resulted only in forced transfers from consumers and suppliers to factors of production in the industry; they did not appreciably stimulate industrialization.

More work is needed to test whether this negative verdict on tariffs also holds for other industries. But cotton and wool textiles were important in themselves, and Robert Fogel's study of railmaking, in *Railroads and American Economic Growth*, does not suggest that tariffs were an important factor in this branch of steel manufacturing. Albert Fishlow reached even stronger conclusions in this vein.[7] So if tariffs were not stimulative in the leading iron-steel and textile industries, where did they help?

Moreover, there are dynamic as well as static-efficiency reasons for applauding the Jacksonian tariff cuts as even positively favoring efficient industrialization. First of all stands a fact: it is now established that industrialization was well under way prior to the Civil War. When reasonable assumptions are made on the division of Robert Gallman's estimates of gross fixed capital investment between manufacturing and other industries, not even a post–Civil War speedup in industrial growth is implied.

Secondly, tariffs had negative as well as positive consequences even in industries where cost reduction depended on cumulated output rather than time. Tariff protection substitutes political log-rolling and other political activity for innovative activity by industrial managers. Time spent agitating for tariffs is time lost for the latter. The most promising product specializations are apt to be neglected, and the least promising favored, in tariff setting because the surplus to be obtained from forming political coalitions is greater for potentially less profitable than potentially more profitable firms. If, for example, the short-run price for firms in two output lines is standardized at one dollar per unit with tariff protection but the price without tariffs would be ninety-five cents for firm A but a very low sixty cents for firm B, firm B has much more of an incentive to shoulder the costs of forming a tariff-increasing coalition than does firm A.[8] Moreover, it seems reasonable to infer that there is a high positive correlation between short-run and long-run costs when the correlation is among firms. If this holds, the industries investing in political action will tend to be those with the least, not the most, chance of eventually being able to do without tariff protection or even having a comparative advantage in world markets. This model accords well with the dreary experience of import-substitution policies among today's developing countries.

We should also remember that, by and large, American agriculture had a comparative advantage in world markets, prior to the 1860s or even later. Hence any counterfactual decision to force industrialization by maintaining or increasing pre-Jacksonian tariffs would have meant static efficiency losses. And this is not all. If elasticities of transoceanic migration of labor and capital were high enough, this would have imposed a serious negative feedback on manufacturing growth because fewer farmers and less capital would have reduced the internal market for manufacturing output produced here. Even neglecting the dynamic efficiency point just raised, perhaps by positing an unworldly Platonic philosopher-king model of tariff setting, a dynamic model by which lower tariffs meant greater manufacturing growth in the long run does not seem inherently unreasonable from our knowledge of labor migration patterns that we owe to Jeffrey Williamson and others.

Internal Improvements

According to many economists and historians, state aid to transportation ("internal improvements," in the political terminology of the 1820s and 1830s) was very useful if not indispensable to agricultural and industrial growth. In their thinking, the private sector cannot raise the capital needed for ports, railroads, canals, and roads because of lumpy initial capital requirements and/or large initial losses before economic growth induced by the projects bails the latter out and makes them privately profitable. In addition, the state can capture benefits conferred on other parties by the transportation projects, by means of taxation levied on those receiving the benefits, while private investors cannot. Hence, government financing of transportation infrastructure is necessary if development is to proceed at an optimal pace; for the former requires building ahead of demand. This argument was captured in a sentence by Walt Whitman Rostow in his *Stages of Economic Growth*: "you either build the line from Chicago to San Francisco or you do not: an incomplete railroad line is of limited use."[9]

This argument was countered by Albert Fishlow in *American Railroads and the Transformation of the Antebellum Economy*. The argument that extensive government aid to railroads at the national level was desirable must imply that railroads had to be built ahead of demand; otherwise, it would follow that demand would have been sufficient at the outset to yield a normal or above-normal profit to railroad owners without federal subsidies or other aid. But Fishlow found abundant evidence that, in fact, the opening of new farmland to settlers was *not* retarded by any failure of railroads to plunge into empty space before settlers arrived. For railroads and farmers alike could and did think ahead and exchange information with each other, so that settlers used market information to arrive in large numbers ahead of the actual construction of railroads in territories where they were planned.[10] And the tremendous vigor of railroad construction prior to 1860 implies no retardation of construction in the antebellum years by reliance on private and *local* government funds. The use of the latter also bears on the familiar argument that private construction of transportation and other social infrastructure would be insufficient because, say, a railroad privately financed could not capture increases in value of the property of farmers, merchants, and other capitalists. In fact, however, towns and countries were competing for railroad lines; therefore they were willing to contribute to construction costs by grants of locally owned land, purchase of railroad securities, and the like. After detailed investigation, Fishlow found that few or no opportunities were missed by such competition among railroads and local governments for funds and lines respectively. Indeed, there were more cases of overbuilding than underbuilding; and significantly, several cases of socially unprofitable lines were found where state, not local, governments had used the Rostow argument and constructed with public funds railroads plunging into empty territories.

Of course, this conclusion does not apply to canals as a matter of fact; Carter Goodrich has documented the overwhelming importance of government financing and operation at the state level. But states were subject to balanced-budget rules and competed with each other for traffic, so that their activities fit without too much difficulty into a private-enterprise paradigm. And such state construction rested on a capital market imperfection that later eroded away under Jacksonian rules. In the era of canal building from the War of 1812 to the 1830s, securities markets were well established for governments (particularly in England) but almost nonexistent for private companies, according to the conventional story. Hence governments could raise capital at a low cost while private companies could not; hence government operation was optimal. In addition, canals were much simpler to operate than were railroads because canals did not own the vehicles using them; thus bureaucratic management could be and was tolerably efficient.

Perhaps. Still, it is surprising how rapidly markets for private railroad securities did develop once the potential profitability of lines became clear. This suggests that markets were endogenous to the process rather than being an institutionally given datum. We should therefore look to technical features of canals, rather than characteristics of markets for securities, as the reason why state operation and financing of canals was favored. It is interesting in this context that public financing of roads, streets, and highways was preferred even during the era of laissez faire when many experiments were made with private as well as public ownership. Perhaps this explains the canals exception.

But in any case, the Jacksonians abhorred federal financing of transportation improvements and got their way. (The one exception—federal land grants to the Illinois Railroad during the 1850s—is explainable by political forces overriding economic doctrines: Southern senators and representatives wanted the Illinois Central line from Chicago to the Gulf of Mexico in order to tie the economic interests of Midwestern farmers closer to those of Southerners.) The benefits, in reducing fun and games with federal money and property of the type common in post-Civil War "mixed enterprises" of the Union Pacific and Central Pacific types, were clear enough on the level of political morality. What is new is that Fishlow's research suggests that there was no loss in economic growth to counterweigh this political gain. Jacksonian laissez faire worked even in a domain where we might expect it not to have worked.

THE REPUBLICAN ASCENDANCY AFTER 1860

The conventional history also states that the long Republican ascendancy between 1860 and 1912 appreciably stimulated the growth of manufacturing. First of all, the Civil War was necessary to break the domination of farmers and Southern planters over the federal government. Then, Republicans could establish a sound currency through the national bank system, raise protective tariffs, stimulate profits by currency depreciation (the Greenback issues of the Civil War), and break constraints offered by slavery without costs to taxpayers by emancipating the slaves without compensation. As a result, so the story concludes, an agricultural America industrialized.

Concerning the Civil War, the Charles Beard interpretation of it being necessary to capitalist industrialization was first attacked by Thomas Cochran in an article provocatively titled, "Did the Civil War

Retard Industrialization?" "Old economic history" in its methods, the article nevertheless drew on the first findings of the new and showed that industrial production, railroad building and capital investment declined sharply during the conflict. Therefore, the Civil War did not create any immediate surge in output as twentieth century wars did. Nor was there any Keynesian surge in resource utilization during the conflict because the economy was fully employed prior to it.[11] Using more formal cliometric analysis, Claudia Goldin and Frank Lewis found that the conflict caused huge losses to the economy because of deaths in combat, material destruction, and the diversion of output from consumption and investment to war purposes.[12] By implication, therefore, the war must have retarded economic growth due to these losses alone. Induced immigration may have compensated for part of the losses of human capital due to combat deaths, but native American and immigrant workers would have to have been perfect substitutes for each other and the immigration mechanism to have worked without costs of emigration or other frictions, for each dead soldier to have been replaced by an immigrant worker of the same efficiency. And this seems highly unlikely indeed, even though a general equilibrium model is needed to satisfy Goldin and Lewis's critics.

But the direct costs of the war may have been more than offset by removal of political and/or legal barriers to industrialization. This was the Beard thesis in his very influential book, *The Rise of American Civilization.* According to Beard, a political alliance of Southern and Northern planters stood athwart the path of American industrialization and the interests of the emerging businessmen of the North prior to 1860. These businessmen cleverly forged an alliance with abolitionists, captured the new Republican party, and seized control of the American federal government during the Civil War. They passed legislation setting up high protective tariffs, federally chartered national banks, and subsidies to railroads. As a result, the United States industrialized even as the resulting social problems foretold the coming of the New Deal. Indeed, much American historiography has been in this teleological vein. All events since the landing of the Pilgrims are seen to work towards the apotheosis of Franklin and Eleanor Roosevelt or John F. Kennedy.

The first assault on the myth was purely cliometric: Robert Gallman's estimates of American gross national product and its components. If Beard has been right, his estimates should demonstrate a rise in the rate of growth of GNP after 1860 or at least 1865. But Gallman's estimates showed no such take-off into a higher growth rate. The American economy grew at just about the same pace after 1865 as it did between 1839 and 1860.[13] Subsequent cliometric analyses using general equilibrium theory, such as that by Jeffrey Williamson, showed that this failure of growth to rise was not due to offsetting factors such as a slowdown in immigration of men and capital.

But these results from Gallman and Williamson are not conclusive because of the complexity of historical causation. So let us put another question on the board. Did the federal policy changes made by the dominant Republican Party during and after the Civil War tend to accelerate growth? And by how much, if they did? If the impact was great enough, the Beardsian interpretation of the Civil War as a second American revolution might be vindicated after all.

Six Republican policies of the Civil War period can be contrasted with those of their mainly Democratic predecessors. First, high protective tariffs broke with the downward trend in import duty rates starting with the Walker Act of 1846 and continued in the 1857 act. The Homestead Act and the Morrill Act gave free land to homesteaders and agricultural land grant colleges respectively. The Civil War was partly financed by inflationary greenback issues, but after the war Congress and the president decided to return to gold at par gradually (it took fourteen years, from 1865 to full resumption of specie payments in 1879). Banks were chartered by the federal government for the first time since Andrew Jackson broke the Second Bank of the United States; indeed, chartering was forced by limitation of the banknote-issue privilege to federally chartered national banks. (However, banks giving up note issues could continue to operate with state charters.) Slaves were emancipated without compensation to owners. Finally, transcontinental railroads were subsidized by land grants and indirect federal lending (railroads were loaned government bonds that they then could sell on financial markets for cash). What has the new economic history to say about the separate and combined growth-promoting power of each and of all together?

The verdict on subsidies to railroads is positive. The social cost was exceeded by social returns. On the other hand, Hugh Rockoff and others have shown that the pre-National Bank system of state-chartered banks served the financial community and ordinary people reasonably well. And Milton Friedman and Anna Schwartz, in *A Monetary History of the United States*, have shown that national banks issued only a fraction of the currency that they were entitled to issue, despite an apparent high profitability of such issues.[14] Of course, such notes were uniformly safe to holders because they were backed by U.S. government bonds, unlike the state banknote issues that had included those of wildcat banks. But the Friedman and Schwartz finding implies a structural inefficiency in the note-issue system, whereas we have found that the pre-1860 banks operated with much greater efficiency than the traditional history of Catterall and even Bray Hammond had attributed.[15] And Civil War legislation did nothing about the real weakness of the American banking system: the government's refusal to allow interstate branching of banks and thereby more efficient transfers of capital from capital-rich to capital-scarce regions. Unless new research explains away these points, we must turn thumbs down on the hypothesis that the new national bank system accelerated economic growth.

Robert Fogel and Stanley Engerman have shown that the South could have expanded output of agricultural staples profitably if slavery had been allowed to continue.[16] Therefore, the traditional story of emancipation as being helpful to American growth (as contrasted with welfare) is weakened. The Robert Higgs and Ransom-Sutch histories of black progress and retardation between 1865 and World War I show that black real income per head did rise at about the same *relative* pace as did Southern white income per head, between about 1870 and 1914. (Since most blacks continued to live in the South, Southern white income is the appropriate yardstick.) But Richard Easterlin's estimates of regional GNP in the nineteenth century show a sudden, sharp decline in Southern economic growth, relative to either that of the North or the Southern pre-1860 rate, between 1860 and 1880. Thereafter the South kept pace with the North, but at a much lower level than before 1860. This was not due to migration of labor to the North or the West; per capita income figures show approximately the same Southern decline. And some reasons for this are plain enough in the Higgs and Ransom-Sutch studies referred to in the section on American slavery. Blacks took gains from emancipation primarily in the form of more leisure rather than greater real income and consumption; and this was good for welfare but not for growth. After Northern efforts to help blacks during the Reconstruction Era had foundered on government inefficiency and white Southern resistance, blacks were more or less gradually denied the franchise; and restrictive licensing and other legislation, by Robert Higg's account, created large to insuperable obstacles to black advancement and therefore to black motivations to excel.[17] The Ransom-Sutch theory of debt peonage and therefore inefficient capital markets is badly flawed in its data and its microeconomic foundations, but the inefficiency of Southern rural capital markets was real enough.[18] Emancipation without compensation also created much the same type of capital shortage in the South as did the destruction of German savings by hyperinflation after World War I.[19]

To sum up, emancipation as actually conducted probably slowed down Southern and American growth, however imperative it was from a moral standpoint, for the losses of the South were not offset by related gains of the North and the West. We now know enough to assert that it is perfectly absurd to date industrialization at starting after 1865 or even suddenly shooting forward. More research is needed on this, but Gallman data on total investment in fixed capital show the peak being reached (relative to GNP) before, not after, the Civil War. Manufacturing output did grow both absolutely and relative to agricultural output after 1865; but this seems to have been a continuation of a trend beginning in the 1840s or possibly even earlier, not a sudden, sharp break.

The Homestead Act of 1862 did provide free farms of up to 160 acres for settlers fulfilling easy conditions. If the federal government had set high prices or onerous financial terms for settlers prior to 1860, this would have meant a great deal. But Douglass North's *Growth and Welfare in the American Past* shows that as early as 1832, the minimum federal auction price for publicly owned land had dropped to $1.25 an acre. This approximated only one day's wage for a semi-skilled or even many unskilled male workers. In 1841, the Pre-

Emption Act validated the claims of many squatters who had not paid a dime; in 1854 a Graduation Act lowered the price of unsold land below even the $1.25 an acre figure set in 1832. And speculators did *not* charge excessive prices under the pre-1862 system, according to Douglas North. Given what we know about real income and its distribution, the Homestead Act could not have made such a difference in the pace of land settlement.[20] The Morrill Act, on the other hand, undoubtedly benefited the dissemination of agricultural information and agricultural education and research. But the modest size of the state colleges of agriculture founded as a result suggests that the positive impact was insignificant for at least a generation after 1865.

Greenback inflation was followed by a fourteen-year period of deflation. While *general* price deflation is certainly consonant with vigorous economic growth, no theorist or economic historian known to this author has suggested that it has ever increased growth. And as we have seen, wartime inflation did *not* cause any increase in business investment during the conflict; instead, Cochran's finding that business (including railroad) investment dropped sharply while prices were soaring stands unchallenged. Nor did Civil War inflation redistribute income from the poor to the rich who might have saved more, according to Armen Alchian and Reuben Kessel's article criticizing Wesley Mitchell's earlier finding that it did.[21] Therefore, it is unlikely indeed that inflation and subsequent deflation accelerated growth.

Of five Republican policies, therefore, only one—land grants to railroads—had sizeable and unambiguous growth-promoting effects. What about the last: the change from low- to high-import duties? The growth effect of tariffs is a complex subject. In static terms, they result in a lower efficiency of resource allocation than would result from equal taxation of all goods to raise the same revenue. But since the time of John Stuart Mill, infant-industry arguments have been respectable, although that respectability has been diminishing.[22] We can fairly summarize an argument among cliometricians that is perhaps just beginning that protective tariffs *may* have accelerated overall economic growth, but the case for this remains highly uncertain. Jeffrey Williamson has also hypothesized that the post–Civil War federal policy of reducing the government debt by running budget surpluses based on regressive taxation benefited growth. (This policy transferred income from persons with low to persons with high marginal propensities to save, so that overall savings and therefore investment rose.)[23] Since high tariff rates hit the less well off and also brought in more revenues than pre-1860 low tariff rates would have, this system of taxation was probably beneficial for growth. On the other hand, an alternative system of uniform excise tax on consumption goods regardless of origin at home or abroad would have done the same job without causing static inefficiency (diverting resources from more-efficient to less-efficient uses). And as we saw in the section on the Jacksonians, Paul David has struck a hard blow at the validity of infant-industry argument for nineteenth century manufacturing. On balance, the Republican change in tariff policy undoubtedly accelerated growth of manufacturing somewhat. But it harmed agricultural growth (agriculture, with very few exceptions such as sheep-farming, produced for the world market or did not need tariff protection, while tariffs reduced agricultural income and therefore saving and capital formation). Since agriculture remained important, the net impact on growth of all sectors combined remains doubtful.

We can now put all these points together. The growth-promoting effects of the Republican Party ascendancy after 1860 (between then and 1914, a Democrat was President in only 8 of 54 years) was minimal indeed. Only one (or possibly two) out of the six changes in policy had sizeable effects, and the sizeable impact was limited to the area west of Omaha, Nebraska. If we compare these small impacts with the sizeable economic costs of the Civil War, the latter would seem to have been a bad economic investment for the nation as a whole. This surmise is strengthened by the fact that even prior to 1860, the federal government was moving towards a land grant policy for railroads, as is seen by the large grants given to the Illinois Central Railroad in the 1850s. And in any case, subsidized transcontinental railroads benefited agriculture, not industry.[24]

Therefore, the Beard argument should be rejected. Of course, the Civil War did promote equity by its emancipation of black slaves. But this was not the Beard argument, which was that it was required for industrialization. As for the welfare of capitalists, the Beard argument is on somewhat stronger grounds. But capitalists were by no means an oppressed group prior to 1860, and the classic argument of Paul Samuelson and Wolfgang Stolper suggests, when applied to known data, that capitalists had to share their gains with urban labor (both benefited at the expense of landowners and farmers).[25] And while Northern capitalists gained somewhat, Southern capitalists lost from emancipation of slaves without compensation. The size of the aggregate gain to all capitalists, South and North, would therefore appear to have been small or possibly even zero.

Conclusions and Implications

This paper focused not on what the Jacksonians said but what the Jacksonians accomplished. In fact, it is concluded, their policies did *not* harm manufacturing growth and may even have promoted it. Therefore, the subjective motivations of the Jacksonians (and surely, these differed greatly among members of this movement) are irrelevant: whether they applauded or deplored industrialization and the concomitant rise of a powerful business class is not at issue.

And these effects of Jacksonian policies are not irrelevant to many of today's issues, particularly those affecting backward or developing countries. We should remember, in this context, that the Jacksonian movement led by Andrew Jackson, Thomas Benton, Martin van Buren, James Polk, and even such epigoni as James Buchanan, was the most uncompromising laissez-faire one in American history. Each day, as Bray Hammond reminds us in his magisterial *Banks and*

Politics in America, the front page of the leading Jacksonian newspaper in Washington edited by Francis Blair blazed with the motto, "The World Is Governed Too Much." And this in an era where all levels of government consumed less than 5 percent of gross national product! Their hostility to monopolies only echoed that of Adam Smith and David Ricardo then or—to commit an anachronism—of Milton Friedman today. Their hostility to the Second Bank of the United States prefigures a skepticism or hostility to government-business "cooperation" that has been a persistent theme in American political history and is echoed today both by libertarians and by the *Wall Street Journal* editorial page. Indeed, much political history could be rewritten to align liberals up to the time of Woodrow Wilson with today's libertarians and principled market conservatives, while the lines would appear to run from the Hamiltonians and the pre-1860 Whigs with today's advocates of government-business cooperation, "reindustrialization," and targeted federal assistance to specific firms and industries. Which, of course, differs somewhat from the alignment suggested by Arthur Schlesinger, Jr., in *The Age of Jackson.*

But this is political more than economic history and is irrelevant to our focus on what the Jacksonians accomplished. Another view might well be that government policies were far less influential in determining the growth path than the traditional history has alleged them to be. By this view, interventionist government policies of the post-1860 variety, did not help but did not do much harm either, given the basic laissez-faire structure of the economy.

But didn't setting the basic rules matter? By still another view, the Jacksonians were very crucial to growth because they finally set in concrete the basic laissez-faire thrust of government policy that had been dominant ever since the detailed setting of prices and regulation of transactions that Oscar Handlin has documented for seventeenth-century Massachusetts (see *Commonwealth Massachusetts*) were eroded away in the eighteenth century. By the Civil War, the set of policies and attitudes was so firm that post-Civil War Republican intervention had to be limited in scope. And American growth and welfare continued to flourish in a laissez-faire setting.

1. Sound and sustainable growth is defined as that in which the productivity of land, labor, and capital grows at the same, or a higher, rate in the manufacturing sector as it does in nonmanufacturing activities. This is obviously different from gains in output achieved merely by forcing productive factors into manufacturing by import prohibitions or other tax or coercive measures by the state.

2. Respectively, *Banks and Politics in America from the Revolution to the Civil War* and *The Age of Jackson.* This writer concentrates on Bray Hammond and Arthur Schlesinger, Jr., rather than on more recent work, because attention should always be given to the masters and not to the imitators. In addition, more recent work in this tradition has lacked in a synthetic view.

3. Such advocates of free banking resembled closely their contemporaries of the Banking School in English monetary controversies (see Jacob Viner, *Studies in the Theory of International Trade*, New York: Harper & Bros., 1937, ch. 5). Jacksonians also, in general, supported limitation of note denominations to $10 or over so that workingmen

would be paid in hard money. Besides reasons of equity, this was sensible because notes were restricted in practical use to classes of the community with superior knowledge of banks and lower brokerage costs of converting notes into gold (because of their greater volume of transactions combined with the fixedness of costs of conversion).

4. Unpublished Ph.D. dissertation, summarized in Hugh Rockoff, "American Free Banking Before the Civil War: a Reexamination," *Journal of Economic History* 32: 417–420.

5. Paul David, "Learning by Doing and Tariff Protection," *Journal of Economic History* (September 1970), and "The 'Horndal Effect' in Lowell: a Short-Run Learning Curve," *Explorations in Economic History* 10 (Winter 1973): 131-151.

6. Tariffs on imported cloth were lower during this decade than before or after, because of the Walker Act of 1846 and the 1857 act (at the start of the Civil War, tariffs were increased repeatedly). In particular, the Walker Act abolished the minimum duty of six cents a yard on cotton cloth, which had been moderately protective when first enacted in 1816 but increasingly protective thereafter because of the pronounced fall in cloth prices up to the 1860s.

7. Albert Fishlow's definitive work on American railroads (*American Railroads and the Transformation of the Antebellum Economy*, Cambridge: Harvard University Press, 1965, pp. 132–145) shows almost no stimulus to American rail output from high tariffs, if not perverse effects. High duties of the 1830s and 1840s caused railroads to successfully press for rebates that wiped out protection in effect. The American industry began to compete successfully with English industries only during the 1850s, after import duties had been very substantially lowered by the 1846 act. See especially Fishlow on Abram Hewlett, p. 144.

8. A useful discussion along these lines is in Lance Davis and Douglas North, *Institutional Innovation and American Economic Growth* (Cambridge: Cambridge University Press, 1971). Davis and North distinguish between innovation coalitions and transfer coalitions, the latter being designed to remove wealth from one group and confer it on another group.

9. Walt Whitman Rostow, *Stages of Economic Growth* (Cambridge: Cambridge University Press, 1971), p. 25.

10. Fishlow, *American Railroads*, ch. 4.

11. The Cochran article is in *Mississippi Valley Historical Review* 48 (September 1961): 191-210. Also, see Gilchrist and Lewis (editors), *Economic Change in the Civil War Era* (Wilmington: Eleutherian Mills-Hagley Foundation, 1965) and Stanley Engerman, "The Economic Impact of the Civil War," *Explorations in Economic History* (Spring-Summer 1966) which adds much new data supporting Cochran's findings.

12. Claudia Goldin and Frank Lewis, "The Economic Cost of the Civil War," *Journal of Economic History* 35: (June 1975): 299–326. They estimated total direct and indirect costs of the Civil War to all regions at roughly $16.7 billion (I add their North and South estimates for this figure). This was four times the 1860 United States GNP or slightly higher, according to either the Robert Gallman or Thomas Berry estimates of the latter (both Lewis-Goldin cost estimates and the Berry-Gallman GNP ones are in constant dollars).

13. Compound annual growth rates were 4 percent for the 1850–1860 decade and 4.4 percent for the twenty years between 1860 and 1880 (from Robert Gallman unpublished annual GNP estimates). The downward bias from including Civil War years in the latter is probably offset by the upward bias caused by exaggeration of GNP growth in the 1870s due to errors in the 1869 and 1879 data (the latter are commented on in detail in Milton Friedman and Anna Schwartz, *A Monetary History of the United States*, Princeton: Princeton University Press, 1963, pp. 36-41).

14. Ibid., p. 23.

15. An intuitively appealing hypothesis explaining the high return on note issues (and therefore underissue from an economic efficiency standpoint) is price risks on the U.S. government long-term bonds that had to be deposited with the treasury as collateral against issued notes. By contrast, a free banking system of the Ludwig von Mises type would have permitted banks to issue notes against far less price-risky securities: short-term commercial paper, as well as gold reserves.

16. *Time on the Cross* (Boston: Little-Brown, 1974). Gavin Wright (*The Political Economy of the Cotton South*, New York: Norton, 1978, ch. 4) argued that to the con-

trary, sagging postwar demand for cotton in the world economy would have made slavery unprofitable. However, Wright's cliometric argument is based on misspecified equations making the erroneous assumption that a counterfactual slave economy after 1865 would have expanded cotton production more rapidly than it actually did. By contrast, the Fogel-Engerman argument is based on efficiency grounds.

17. Robert Higgs, *Competition and Coercion* (New York: Cambridge University Press, 1977) and Roger Ransom and Richard Sutch, *One Kind of Freedom* (New York: Cambridge University Press, 1977).

18. See Lance Davis, "The Investment Market, 1870–1914: The Evolution of a National Market," *Journal of Economic History* 25 (September 1965) for the reasons: the lack of nationwide branch banking and other government-imposed barriers to capital mobility among American regions.

19. However, the reason was different. Emancipation without compensation was in itself a zero-sum process or even a positive-sum one: the slave gained as much in human capital, at the least, as the master lost. However, Southern racism and the poverty of freed slaves meant that slaves did not gain as much borrowing power (one cannot pledge himself as collateral) as masters lost. Hence the borrowing capabilities of the South, for masters and slaves taken together, were seriously eroded.

20. See Douglas North, *Growth and Welfare in the American Past*, 2d ed. (Englewood Cliffs: Prentice-Hall, 1974), ch. 10.

21. Armen Alchian and Reuben Kessel, "Real Wages in the North during the Civil War: Mitchell's Data Reinterpreted," *Journal of Law and Economics* 1 (Oct. 1959).

22. See Paul David, "Learning by Doing." Particular insight on the infant-industry argument is given by Austrian economic theory that emphasizes the searching nature of entrepreneurial activity in a world characterized by uncertainty. This implies rather conclusively that the infants selected by government for protection would almost invariably be the wrong children *even if* the actual political process of selection was chaste and pure instead of being the grubby, inefficiency-promoting one that it is.

23. Jeffrey Williamson, "Watersheds and Turning Points: Conjectures on the Long-Term Impact of Civil War Financing," *Journal of Economic History* 34 (Sept. 1974). His model is dubious even on neo-Keynesian grounds since in the latter type of model, marginal and not average savings/income ratios call the tune. However, the new supply-side economics offers a more appealing rationale yielding the same results.

24. These railroads ran through territories where manufacturing was nil up to 1914. Of course, induced development of farming provided markets for American industrial products; but this argument is entirely spurious, for the farming and stock raising was in the belt of land stretching only three to five hundred miles west of existing railheads of roads that had never received federal land, bond, or other subsidies under pre-1860 Jacksonian policies (only one exception: the Chicago and Rock Island line, which never amounted to anything, according to Fishlow, *American Railroads*). It is inconceivable that these existing lines would not have built extensions into this area stretching from eastern Montana to Texas without federal subsidies, in view of the synchronous and rapid extension of farming and railroad lines prior to the Civil War described earlier.

25. An independent approach also supports this conclusion. A well-known finding of Simon Kuznets is that income inequality first increases and subsequently (but much later) decreases during the process of industrialization. So if Charles Beard and his followers were correct, we might expect income inequality to have been low prior to 1860 and to have increased sharply thereafter. However, what we know shows just the opposite. When the Alice Hansen Jones findings for 1774 (*The Wealth of a Nation to Be*, New York: Columbia University Press, 1980) are compared with those of Robert Gallman and Lee Soltow for the period, 1850–1914, we find that by far the greatest increase in wealth or income inequality occurred *prior* to 1860. Thereafter, the increase was slight or even may have leveled off or declined. (The abolition of slavery is adjusted for, in these calculations, by calculating inequality from 1774 to 1914 as it would have been if slavery had never existed but the actual slave and free populations had remained the same.)