American Government and the Promotion of Economic Development In the National Era, 1790 to 1860

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I apologize for the length of the paper, but nothing extraneous was included accept several extra figures and perhaps a table or two.

When Americans decided for independence in the spring of 1776 they faced many difficult decisions. They were declaring there independence as independent states. John Adams, leader of the Congress and later President of the United States, believed the real declaration of independence was made on May 6, 1776, when Congress asked the individual states to write their own constitutions.[1] But they also declared their independence together, as part of a nation. Once independence was declared, the balancing act of political genius was creating a national government strong enough to defend the country from external threats, while keeping the national government weak enough internally that it did not threaten the independence of the states. It took a long time to get the balance right. The first national constitution, the Articles of Confederation, created a national government just barely strong enough to secure independence, but not strong enough to pay off its debts, deal adequately with international affairs, or referee disputes between the states. The second constitution adopted in 1787 created a stronger national government. But that constitution left unsettled so many of the details about sharing power between national and state governments that internal debate over the proper "constitutional" powers of the national government brought the nation to the brink of disunity several times and finally to civil war in 1861. The biggest issue facing American government between 1790 and 1860 was internal, not external. How were Americans to govern themselves? How were power and policies to be shared between the national and state governments?

The division of responsibility between national and state governments was a source of constant debate between 1790 and 1860. Some functions of government were divided and some were shared between the two levels, and any history of government between 1790 and 1860 must take both levels into account. Our interest in explaining the structure of American government as well as how government consciously or inadvertently promoted economic development. It begins by tracing in rough outlines the size and structure of government before the Civil War. After a sketch of the sources of growth in the American economy, it identifies the main policies of the national and state government, and what each level did to promote economic development.[2]

I. *Constitutions, the Division of Powers, and the Sharing of Powers*:

By 1780, every state but two heeded the call to write new constitutions. Connecticut and Rhode Island adopted their colonial charters as constitutions by substituting the state for the King. Every new constitution incorporated the idea of British mixed government – the King, the Lords, and the Commons – with bicameral legislatures and an independent executive. While all were democratic republics, the extent of democracy varied (all states had some wealth, property, or tax paying restrictions on voting and/or office holding), as did the internal relationships between the legislative bodies themselves and with the executive.[3] Over the next fifty years most states adopted universal white male suffrage, streamlined their legislative machinery, and clarified the role and structure of the judiciary.[4]

The Articles of Confederation were proposed in 1777, but not ratified until 1781. Maryland ratified last, and only when New York agreed to cede its western land claims to the national government and other states agreed, in principle, to cede their claims as well.[5] The Articles gave the Congress control over international relations and the military, but otherwise did not create a strong national government. States retained the sole power to levy taxes and the national government could only request funds from the states.[6] While the Articles did not forbid national taxation, changes to the Articles required the consent of every state and Congress viewed any attempt to impose a national tax as a change in the Articles.[7] The unanimity provision protected each state individually from any national policy they did not like. But the unanimity clause meant that the new Congress of the United States – the Articles created neither an executive or judicial branch – was hamstrung from the very beginning.

The inability to levy national taxes meant that Congress was forever short of funds. Congress began by printing its own currency, but soon "continental dollars" were almost worthless. The United States was forced to borrow from domestic and international lenders to fight the revolutionary war. Victory did nothing to alleviate the government's financial burdens. The national government defaulted (stopped paying annual interest) on most of its bonds after the war was over, although it promised to eventually to repay all of its debts. In 1781 and in 1783, Congress passed legislation asking the states to give permission for a national "impost," a import tax, but first Rhode Island and then New York refused to give their assent. By 1785, the national government was bankrupt.[8]

The inability of the national government to raise revenue crippled its ability to provide national defense: the reason for its existence. Writing a new constitution giving the national government sufficient power to raise revenue to provide for external defense threatened internal liberties (see Robert McGuire's essay in this volume). How could a national government with the power to tax be controlled? Article I, section I of the constitution provides that "All legislative powers herein granted shall be vested in a Congress of the United States," and Article I, section II that "Representatives and direct Taxes shall be apportioned among the several States which may be included in this Union, according to their respective Numbers, which shall be determined by adding to the whole Number of Free persons, including those bound to Service for a Term of Years, and excluding Indians not taxed, three fifths of all other persons." Taxation was equated with representation.

The Constitution is a remarkably short document for all that it accomplishes. It is built around several checks and limits. First, it divides authority and decision making between the Legislative (Article I), Executive (Article II), and Judicial branches (Article III). Second, it enumerates national government powers in Section 8 of Article I and explicitly limits those powers in Article 1, section 9. The Tenth Amendment, "The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people," in combination with the enumeration of powers places effective limits on the national government. Article 1, section 10 places explicit prohibitions on specific state government powers. But states retain an explicit the power to act as an external check on the national government through the ability of state governments to appoint Senators directly.

What powers are given solely to the national government, which are shared between state and national governments, and which reside solely with the states?

Powers given to solely to the national government (and conversely prohibited to the states) include:

- Regulation and conduct of international relations and international trade.

- Provision of national defense and the raising of an Army, although states are allowed to have militias.

- Power over the minting of coins, the printing of money, and regulation of the currency. States cannot "coin money; emit Bills of Credit; make anything but gold and silver coins a Tender in Payment of Debts" (Article 1, section 10).

- Regulate the movement of goods between states and internationally. The national government has the power to "Regulate Commerce with foreign nations, and among the several States, and with the Indian tribes."(article I, section 8) States are enjoined from imposing import or export duties without the consent of Congress.

National and state governments share the:

- Power to tax. With restrictions on the national governments ability to levy direct taxes (they can only be apportioned by population) and the national prohibition on export duties.

- Police powers. These are the use of the powers of government to "promote the general welfare."

- All the powers of sovereignty associated with the common law powers of government in Britain This is implied rather than stated by the "necessary and proper" clause. So, for example, both national and state governments possessed the power to create corporations, without explicitly stating so in the national or state constitutions.

Finally, the national government was limited in its ability to

- Suspend the writ of Habeas Corpus, pass writs of attainder or ex post facto laws, pass laws giving preference to the citizens of one state over another, or create titles of nobility.

- Suspend any of the individual rights guaranteed in the Bill of Rights (the first Ten Amendments).

- These protections of individual liberties against government infringement would be extended to state governments under the 14th Amendment.

Given these constitutional mandates and restrictions, what did American governments actually do?

II. *The size and functions of American Government*:

No student of Bob Higgs would ever say the size of government is measured simply by the size of revenues, expenditures, or debt. Nonetheless, basic fiscal measures are a good place to begin describing what government did between 1790 and 1860 did. Several important functions of government were not reflected in the budget data and will be discussed later. Table

1 presents information on the size of government revenues by level of government for the 19th and 20th century. The 19th century numbers for local governments are rough estimates that begin only in 1840. The state numbers are also estimates based on fairly complete counts of state fiscal activity. The federal numbers are based on Treasury reports and are complete and accurate. The figures are decade averages (e.g., 1810 is the average of per capita revenues from 1806 to 1815). Per capita revenues are given in current dollars and as a percentage of per capita income.[9]

National government finances followed a distinct pattern driven by war finance. Figures 1 and 2 give national government expenditures and revenues annually in nominal dollars per capita from 1791 to 1936.[10] The War of 1812, the Civil War, and World War I stand out in both figures. The national government paid for wars partly by raising taxes and partly by borrowing money. Figure 3 shows debt per capita and the deficit or surplus in the national budget. Debt measures the total amount of debt outstanding, while the deficit/surplus number measures the change in debt from year to year. These figures are also driven by war finance.

Where did the revenues come from? Figure 4 gives the share of total revenues from customs, land sales, and internal revenue. Internal revenue in the 19th century was primarily excise taxes on alcohol and other products, and after 1917 the income tax. There are three distinct federal revenue structures. The first, from 1790 to 1860 was dominated by customs revenues; the second, from 1860 to 1912, was a combination of customs revenues and internal revenues; and the third, post 1919, was dominated by internal revenues, specifically the income tax. Wars exert their effect on the structure of revenues. In the War of 1812, excise taxes were increased sharply, only to be eliminated after the war. In the Civil War new excise and income taxes were imposed. The income taxes were removed after the war, but the excise taxes were not. Just before World War I the income tax was made constitutional and during that war sharply higher income taxes were collected.

On the expenditure side, Figure 5 gives the share of national expenditures going to the military and to interest payments on the national debt. As we've already discussed in regard to the constitution, the national government acquired a large debt in the revolution, and interest payments on the debt dominated national expenditures in the early years of the republic. Until the 1820s expenditures for the Army, Navy, and interest were usually 80 percent of national expenditures. During the War of 1812, the national debt increased, but it was quickly paid off. By 1835 the debt was zero, and interest payments fell accordingly. Up until the Civil War, defense expenditures average about half of federal expenditures. During the Civil War military expenditures peaked, and interest payments remained high for several decades after the war as debt was gradually paid off. The defense share fell to roughly 20 percent of national expenditures after the Civil War, but then rose again to about 40 percent during the Spanish American war and World War I.

Looking closely between 1790 and 1860 we see the same pattern: figures 6, 7, and 8 show national expenditures, revenues, and debts respectively. After 1790, the national government paid off the revolutionary war debt by running persistent budget surpluses and using the surpluses to retire debt.[11] The lion's share of revenues came from custom receipts. Between 1791 and 1860, the national government raised $1,805,917,000 in revenues. Customs revenue of $1,535,572,000 account for 85 percent of the total. Excise taxes were unpopular, in 179? President Washington had to call out federal troops to suppress a protest of the whiskey excise in western Pennsylvania.[12] Land sales rarely contributed significantly to federal revenues, except in years when land sales boomed, like 1835 and 1836. Tariffs ultimately became a divisive political issue in Congress, but at no time was the national government in a position to remove tariffs entirely or to raise them to prohibitive levels on most imports. There was no feasible or popular alternative to import duties in the early 19th century.

Expenditures totaled $1,730,767,000, between 1790 and 1860, of which $897,122,000 (52 percent) was for military defense and $203,711,000 (12 percent) was for interest payments. The excess of total revenues over total expenditures reflects the repayment of $85,000,000 in national debt. Of the remaining 36 percent of national expenditures, the largest portions went to running the government, what is often called general administration: the costs of running the executive, Congress, and federal courts. There were no large or significant expenditures for any other functions except the post office. Expenditures on transportation, including roads, rivers and harbors, and other improvements came to just $54,000,000 between 1790 and 1860, only 3 percent of national expenditures.

Constructing measures of state government revenues and expenditures is more difficult because states varied widely in the way that they recorded revenues, expenditures, and debts and rarely kept track of everything they did in one report. The numbers in Table 1 give a rough measure of the relative size of state and national governments in the early 19th century. The per capita revenue numbers for state governments are constructed from the states for which Richard Sylla, John Legler, and I have collected information.

Aggregate averages conceal the wide variety in state taxes and spending. Figure 9 presents average annual per capita revenue from all (non-loan) revenue sources Indiana, New

Hampshire, Maryland, and South Carolina as well as per capita federal revenues.[13] Collectively, as in Table 1, state revenues averaged about 20 to 25 percent of national revenues from 1800 to 1830. In the decade between 1835 and 1844, state revenues rose absolutely and as a percentage of national revenues, from less than \$.50 a person to \$.88 and to slightly over half of national revenues, and state revenues continued at a higher level through the 1850s. The rise in state government activity was caused by a boom in state investments in canals, banks, and railroads in the 1830s, and will be discussed in more detail in a following section.

There is considerable variation from year to year and from state to state. Figure 10 shows the per capita revenues of each state government in comparison to federal revenues. Panel 10A shows Maryland, where per capita revenues were between \$.30 and \$.50 per person up to the 1830s. In the late 1820s Maryland began borrowing money to invest in the Chesapeake and Ohio canal. In 1839, the state borrowed \$6,000,000 to save the canal. Total state debt reached \$15,000,000 in 1841. In 1842, Maryland defaulted on its state bonds, not resuming interest payments until 1848. Since the canal never made any money, the state eventually raised taxes to service its debts. As panel 10A shows, by the mid-1840s, per capita tax revenues were \$2.00 per person, four to six times higher than they had been in the 1820s and early 1830s, and equal to national taxes in those years.

Indiana and New Hampshire were both small rural states with very small state governments. Per capita revenues in both states ran about \$.10 to \$.20 per capita in the 1820s (the first year we have data for Indiana is 1825). In the mid-1830s, Indiana began construction on its ambitious canal and railroad network. At a time when the state population was about 500,000 people and the annual state budget about \$50,000, the state legislature authorized a bond issue of $10,000,000 in 5 percent bonds. Annual interest payments on the bonds came to $1.00 per person, an ten-fold increase in size of the state government. Indiana thought, of course, that the canals and railroads would return a profit to the state. When they did not, Indiana, like Maryland, was forced to default on its bonds for a time, and to raise taxes to service it debts. In the 1840s and 1850s, per capita revenues in Indiana ranged between $1.50 and $2.00 per capita, again comparable to federal revenues. In contrast, New Hampshire, which did not borrow money to invest in canals, railroads, or banks, maintained low and steady revenues for the entire period up to 1860.

South Carolina presents another picture. The state was an early and active supporter of canals and banks. South Carolina borrowed in the 1810s to finance investments, and state revenues were always relatively high, between $.40 and $1.00 per person. South Carolina, however, did not participate in the 1830s investment boom. Like New Hampshire, per capita revenues stayed stable for the entire period up to the beginning of the Civil War.

Figure 10 takes the state and national revenues up to 1900 to illustrate a point that jumps out in each graph. National government revenues increased dramatically during the Civil War, remained high while the Civil War debt was retired, and never returned to their pre-war levels. State revenues rose during the war, but were never as high as national revenues. The structure of American government after the Civil War was dramatically different than it was before the Civil War.

What did states spend money on and where did they get their revenues from? In 1831, Hanna's *Financial History of Maryland* breaks down expenditures into the following categories:

Category	Expenditure 1831	Share 1831	Expenditure 1841	Share 1841

Executive Department	$10,378	5%	$15,441	2%
Legislative Department	$33,871	16%	$67,369	8%
Judicial Department	$36,785	17%	$39,102	4%
Education	$18,750	9%	$18,500	2%
Charities	$16,936	8%	$19,987	2%
Penitentiary		0%	$10,000	1%
Negro Colonization		0%	$10,583	1%
Internal Improvements	$21,311	10%	$57,732	6%
Interest on Funded Debt	$20,540	10%	$566,322	63%
Sinking Fund	$500	0%		0%
Miscellaneous	$56,484	26%	$89,456	10%
Total	$215,555		$894,492	

The year 1831 was typical of Maryland before the canal boom. Total expenditures were $215,555. The number are representative of the general pattern of expenditures in many states: 40 percent for government administration, 10 percent for education, and 10 percent for charities (including asylums), in total a bit more than half of all state expenditures. Miscellaneous expenditures were roughly a quarter, and, of course, the content of these expenditures varied from year to year.

The main element in which states differed was the amount of expenditures devoted to "internal improvements" which in the early 19th century meant state expenditures on investments in or the construction and operation of roads, turnpikes, and canals, or investment in banks. South Carolina made early investments in transportation and banking. Virginia had a Board of Public Works in 1816. Pennsylvania was investing in turnpikes in the 1790s.[14] The sharp increase in revenues in Indiana and Maryland in Figure 10 resulted from their needs to finance large canal investments in the mid-1830s. Hanna's figure for 1841 show expenditures were $894,492. Work on the canal had almost ceased, but expenditures on interest alone reached $566,322. The internal improvement boom of the 1830s was critically important for states, and we will consider it in more detail in a later section.

States differed more widely on the revenue side. Revenues came from four general sources: property taxes, poll taxes, taxes on businesses, and asset income. Property taxes were levied on land and other wealth. Property taxes were sometimes levied on a per acre basis, but more commonly they were levied *ad valorem*, that is, on the assessed value of the land and other wealth subject to taxation. Poll taxes were head taxes imposed on voters. Business taxes encompassed a wide variety of fees, licenses, permits, bonuses for corporate charters, and taxes on capital. Asset income was income earned directly as dividends on state investments in corporations, or as tolls on state transportation projects.

Tables 2 and 3 provide information on the importance, or lack of importance, of property taxation in state revenues. Table 2 looks at eleven states from 1800 to the mid-1820s. The table shows the increase in state expenditures during the War of 1812, the middle column 1813 to 1817, and the share of expenditures financed by property taxes. The last rows of the table give simple averages, population weighted averages, and weighted averages excluding Ohio and Delaware, which were outliers with respect to property taxes. The Ohio case is particularly interesting, as it is the only "western" state in this table. Ohio became a state in 1803 and immediately began taxing land. Property taxes initially account for 100 percent of Ohio revenues. Property taxes in most states rose during the War of 1812, absolutely and as a share of total revenues, as states were forced to defend themselves from British troops (the federal government was unable to defend states adequately). States always possessed the ability to tax land, and in emergencies fell back on property taxation as a revenue source.

States preferred, however, to eliminate the property tax if possible. Table 3 gives per capita property tax revenues, property tax shares of total revenues, and per capita total non-loan revenues for a selection of states between 1835 to 1841 and 1842 to 1851. The upper panel of the table lists states that did not depend on the property tax before 1841. Indeed, many states had eliminated the state property tax (not the local property tax) completely before 1830. These states were well established eastern states with substantial amounts of business taxes and asset income. The weighted average property tax share in these states was only 2 percent between 1835 and 1841. States in the second panel were established states in New England that continued to rely on the property tax, a weighted average property tax share of 58 percent. States in the third panel are from the west. These were also states that relied heavily on the property tax, a weighted average of 43 percent of total revenue.

The revenue figures are divided into pre- and post-1842 to demonstrate the effect that the collapse of the canal boom had on the source of state financing. Maryland, Pennsylvania, Illinois, Michigan, Indiana, Florida, Mississippi, Louisiana, and Arkansas all defaulted on their debts in 1841 and 1842. Just as in the War of 1812, states faced a fiscal crisis and fell back on their property taxes. Property taxes rose from \$.03 to \$.87 per capita in Maryland, from \$.02 to \$.53 in Pennsylvania, from \$.01 to \$.14 in New York, from \$.14 to \$.22 in Indiana, \$.21 to \$.52 in Ohio, and \$.23 to \$.34 in Indiana. These represented substantial increases in property tax rates and overall increases in taxation. In each of these states higher taxes were driven by the need to service debts incurred in the 1830s canal boom.

The distinct regional differences in tables 2 and 3 reflected the ability of eastern states (with exceptions in New England) to tax businesses and to acquire ownership in private enterprises. Massachusetts, New York, Pennsylvania, Maryland, Virginia, South Carolina, Georgia, and Alabama all held significant amount of bank stock at some time before 1830.

Massachusetts, Connecticut, and Rhode Island taxed bank capital. The bank capital tax made up over 50 percent of Massachusetts revenues in the 1830. In the 1820s and 1830s taxes on bank capital or charter fees were over 25 percent of revenues in Connecticut, Delaware, Pennsylvania, and North Carolina. Dividends from their bank investments allowed Georgia and Alabama to eliminate their state property taxes in the 1830s.[15] Eastern states also levied an array of taxes on corporate capital, business licenses, and fees of all types.

Western states simply didn't have the businesses to tax and were forced to rely on property and poll taxes. Indiana's 1835 revenues of $50,000 came half from poll taxes and half from property taxes. Western states had land and people, and that is what they taxed.

III. Economic growth and government promotion of economic development

The United States was an agrarian society in 1783. Three quarters of the labor force was engaged directly in farming and a large share of the other quarter worked in processing, packing, shipping, or selling farm products. Perhaps ten percent of the labor force was employed in manufacturing. Agriculture and manufacturing were the two primary sources of economic growth in the early 19th century. Growth in both sectors were related to the growth of the domestic economy within the United States, but what each required from governments in terms of legal and financial support were very different.

The single most important resource Americans possessed through the entire period up to the Civil War was land: more wealth was held in the form of land than in any other form. The peace settlement with Britain gave the new country extensive holdings of western land from the Appalachians to the Mississippi, millions of acres of land the federal government wanted to sell to private individuals. Opening the west to settlement and cultivation was the biggest potential source of economic growth and the nation's number one economic priority. But the process wasn't cheap. There were two elements to the cost. One borne directly by the farmers, the other fell on the larger society.

Land is usually not treated as part of the capital stock, since land possesses certain features like location that are not the result of investment and savings, but improvements to land are definitely capital investments. Raw land, covered with trees or prairie grasses, could not be brought into production without a substantial investment in land clearing, fence building, and farm building. The land itself was cheap, but making a farm was expensive. In 1860, the state of Minnesota estimated that a 160 acre farm cost $775 to establish, and only $200 of that cost was for the land itself. The cost of building farms fell on individuals. Robert Gallman's estimates of the capital stock in the early 19th century show that improvements to land were the single largest element in investment before 1840.[16]

Fertility and location determined the value of land. Western lands were inherently productive, but in the wrong place. The cost of transporting bulk agricultural products over the Appalachian mountains in 1800 exceeded the value of the product. Land prices throughout the country varied in proportion to the distance of the land from viable transportation. Land along the Atlantic and Gulf seaboards and the navigable inland waterways running to the ocean, was much more valuable than land in the interior. Farming in the northwest depended on building a national transportation system linking the Ohio and Mississippi River valleys with the eastern seaboard. The costs of building such a system far exceeded the financial abilities of individual farmers. Many private firms came forward in the 1780s and 1790s and asked states for charters to build canals into the west: ompanies like the Schuykill & Susquehanna Navigation company in Pennsylvania, the Western and Northern Inland Lock Navigation company in New York, or the Potomac Company in Virginia. These companies all tried and failed to breach the Appalachian mountains. In the end, state governments took the lead in successfully building a national transportation network

Farm building and transportation investment were two of the three elements necessary to bring all the nation's farmers into a national market. The third element was a financial system capable of providing short term credits to farmers, shippers, and wholesalers who moved the crops from farms to urban and international markets. A farmer in Ohio faced the problem of selling his crop in the east. One possibility was to sell his wheat in Cincinnati to someone who would arrange to transport it to New York and sell it there. Another possibility was to arrange shipment with a freight line, ship his crop to an agent in New York, and have the agent sell it and send the profits back to him (net of the agent's costs). The difference in these two methods was the ownership of the wheat. If the farmer sells in Cincinnati, the shipper owns the wheat and bears the risk of any rise or fall in the price. If the farmer consigns his crop to an agent, the farmer bears the risk of any change in the price. The most common method in the 19th century was for the farmer to consign his crop and bear the risk of price fluctuations.

The farmer, as a result, did not get paid in cash for his crop in Cincinnati. Instead, the agent to whom he consigned his crop typically authorized the farmer to draw a "bill of exchange" on the agent's representative in New York. This bill was like a check, which the farmer wrote in Ohio, honored by the agent's representative in New York in the future.[17] Since no one in Ohio wanted to be paid with a check drawn on an individual in New York, the farmer usually took the bill to the local bank (if there was one) and sold it to the bank for cash. The bank paid the farmer less than the face value of the bill and then arranged to collect the amount due in New York in the future. The bank's profits came from the difference between what they paid to the farmer and the face value they received when the bill matured. The "discount" between the two prices represented the interest on the loan made to the farmer. Since the farmer wrote the bill in the first place, the farmer was ultimately responsible for honoring the bill if the New York agent did not pay the bill. Sound complicated? It was, but it was the cheapest way of doing business over a long distance when communications and transportation were expensive and took a long time.

Table 4 examines the difference in the price of a barrel of flour in Cincinnati and New York/Philadelphia between 1816 and 1860 to give a rough idea of the importance of declines in transportation and financial costs over the early 19th century. In 1820 a barrel of flour (weighing 196 pounds) cost about $8 in New York and $5.52 in Cincinnati, in 1860 the price was about $5 in New York and $4.72 in Cincinnati.[18] Over time, the difference in prices between the two markets fell from $2.48 a barrel to $.28 a barrel, a decline of almost 90 percent (the lower panel of the table). The bulk of the decline was in transportation costs. In the early 1830s, Ohio completed two canals that linked up southern Ohio with Lake Erie, and via the lake with the Erie Canal and New York city. Transportation costs fell to $1.05 a barrel in 1836-1840, the first full five year period after the canals were in operation. The next major drop in the price differential occurred at the very end of the period, when the difference dropped to $.28 a barrel in 1855-1860, after the railroad (the Baltimore and Ohio was the first) reached across the Appalachians in the early 1850s.

The importance of financial services is approximated by the interest costs on a 90 day loan to finance the shipment of flour east. The table uses two ballpark interest rates, 24 percent in 1820 and 8 percent in 1860. The interest costs of $.33 a barrel comprised 6 percent of the Cincinnati price in 1820, and costs of $.09 percent were only 2 percent of the Cincinnati price in 1860. On the other hand, interest costs were only 13 percent of the price differential in 1820, while they were 33 percent of the price differential in 1860. As the physical cost of transporting goods dropped, financial costs became a more important wedge between producer and consumer prices.

Interest costs were only part of the "transaction costs" of getting goods to market. Freight handling, insurance, and warehousing were all part of transaction costs. The figures give some idea of their importance as well. Once the Ohio canals were open, tolls steadily declined as both New York and Ohio tried to keep as much freight as possible moving over their canals.[19] Despite lower canal tolls, the price difference between Cincinnati and New York widened in the 1840s and fluctuated over time. The rise in the price differential from $1.02 in the 1836-1840 period to $1.68 in the 1846-1850 period must have been the result of higher cost of transaction services, not higher in transportation costs. Financial services were a substantial part of the cost of getting goods to market, and banks played a central role in reducing the transaction costs of getting goods to market.

There were several important advantages to establishing local banks in western and southern state outside the commercially developed northeast. First, banks printed their own money in the form of bank notes, redeemable in gold, that circulated in the local economy.[20] Keeping with the numbers in the previous example, suppose that money could be borrowed in the form of gold coins (specie) in Indiana at an interest rate of 24 percent. A bank that printed

$3 in bank notes for every $1 in gold coins it held in its vaults could discount three times as many bills of exchange in bank notes as it could in gold. The bank could break even if it discounted the bills of exchange for 8 percent, that is, its return on the gold it held would be 24 percent. By creating banks, western states could provide liquidity to their local markets, in the form of bank notes, at much lower cost than the same amount of money in gold coins. Second, the establishment of local banks created local information about credit worthiness of local borrowers. A banker in Indianapolis could better judge the credit risk of his neighbors than a banker in New York. Once the Indianapolis banker established his credit worthiness in New York, he could borrow money in New York to lend in Indianapolis to his profit and to the benefit of his neighbors. Finally, the establishment of local banks and currency provided local markets with some independence from fluctuations in the bank notes of other cities. It is not surprising, then, that every state wanted to encourage the establishment of banks within their boundaries. In southwestern states with access to ocean transport, the states invested heavily in banks, but almost nothing in transportation.

Bringing the west into the national market required improvements in transportation and in financial services. The major beneficiaries of the improvements were farmers in the west who shipped bulky, low value agricultural products to the east and on to international markets. But the investment in the transportation/financial system directly stimulated the growth of manufacturing in the north east. During colonial times Americans imported many of their manufactured goods from Britain, a pattern that withstood the stress of the revolution. American markets for higher quality manufactured goods – hats, clothes, textiles, cutlery, crockery, books, etc – were dominated by British firms. The Embargo and the War of 1812 gave American producers a brief window of protection from British competitors, and there was a surge in the formation of American manufacturing firms and an increase in domestic output. With the resumption of normal relations after the war, British goods flooded back into American markets. American producers could compete with Britain in two ways. The first was protective tariffs, a sole responsibility of the national government under the constitution. The second was the production of cheap, lower quality goods naturally protected by the high transportation costs of shipping goods across the Atlantic.

Because of their higher value and lower weight, manufactured goods always travel well, that is they can be profitably shipped farther than most agricultural products. Opening up the internal domestic market in the United States by reducing transportation and financing costs offered northeastern manufacturers a growing market in cheap, durable, easily repaired or replaced manufactured goods. While agriculture was geographically extensive, expanding output in manufacturing was geographically intensive. Producers bunched together in small geographic areas where costs were lower because of a price advantage (cheap labor or water power) or because of knowledge was more readily available (a key in the new manufacturing technologies), and then distributed their products over a wider area. This geographically intense pattern was made possible by a more efficient distribution system. American manufactures in the early 19th century were not producing for international export (this would change in the later part of the century), but for domestic export.

Manufacturing concentrated in the northeast. Agriculture spread through the rest of the country, grain and meat production in the north, cotton production in the south. Economic growth built on advances in transportation and finance. Promotion of economic growth required investments in banks and canals, later railroads. Whether governments promoted economic development depended on government's ability to stimulate development of transportation and financial systems.

IV. The federal government and promotion of economic development

We have already learned that import tariffs were the major source of federal revenue and that military defense and the interest payments on war debts were the major source of federal expenditures. But not everything a government does is reflected in large revenues or expenditures. Indeed, one of the most important government contributions to economic growth is to provide a stable and unbiased legal environment. The costs of running the judicial system are, in a way, unrelated to whether the government provides effective justice, since corrupt courts might require more expenditures than just courts. This section examines the activities of the national government to see which may have had an impact on economic growth regardless of their size in the budget.

The federal government provided military defense, conducted international relations, ran the postal system, and administered the federal courts. All important functions. Occasionally major debates arose over the conduct of federal policy, but there was never any serious question that the government would cease providing these services. On the other hand, Congress regularly debated import tariffs, support for internal improvements (transportation), public land policy, the existence of a federally chartered bank, and the continued existence of and regulation of slavery. The previous section identified why tariffs, transportation, western land, and banking were important determinants of economic growth in the early 19th century. Slavery was very much an economic issue. The major issues facing Congress, the President, and the federal courts in the early 19th century were how much, if anything, the federal government should do to promote economic development through active policy in these areas.

The Constitution of 1787 explicitly assigned responsibility for tariffs, public lands, and banking to the federal government, and there was never any question that the federal government could build transportation projects and regulate slavery (at least in the territories). This doesn't mean that individuals, including several presidents, didn't argue that a federal bank was unconstitutional, or that the federal government couldn't build a road or a canal without a constitutional amendment, or that the federal government had no power over slavery. It does mean that the federal government was never prohibited from establishing a bank, controlling the emission of money, building a road or a canal, regulating slavery, levying a tariff, fighting a war, or controlling the settlement of western lands because those actions were somehow declared unconstitutional. People, politicians, and presidents sometimes argued that one of these policies was unconstitutional, but that was a political argument, not a constitutional one.[21]

Yet, if the federal government had the constitutional power to promote economic development in these ways, did it use those powers? The question is a subtle one. The federal government did not have the option of not having a policy. For example, giving the federal lands away for free is just as much a policy as not selling any. The questions are not whether the federal government had a policy, but 1) whether the policy it did have was intended to promote growth, 2) how, over this seventy year period, did the policy change, and 3) were the changes intended to increase or decrease federal government promotion of economic development? It appears that the federal policies put in place by 1792 were intended to promote economic development, but after 1792 the federal government found it extremely difficult to expand promotion of economic development farther than the *status quo*.

The easiest policy to quantify and understand is transportation or, in the words of the time, internal improvements. There had always been a strong argument for federal support of transportation projects. George Washington had been an early organizer and supporter of the Potomac Company, which aimed to build a canal from the Chesapeake Bay into the Ohio river valley. Even Thomas Jefferson, later an opponent of federal support for internal improvements, said in his second Inaugural speech in 1805: "the revenue thereby liberated [from paying off the national debt] may, by a just repartition among the states, and corresponding amendment of the constitution, be applied, *in time of peace*, to rivers, canals, roads, arts, manufactures, education, and other great objects within each state."[22] Jefferson mentions a constitutional amendment, one allowing the federal government to make transportation expenditures. This implies Jefferson's belief that such a policy would be "unconstitutional" without an amendment. An interesting position, since Jefferson himself had signed into law the enabling act for Ohio in 1803 which required the federal government to spend 2 percent of the land sales revenues of public land in Ohio on transportation improvements leading to or in Ohio. Congress and Jefferson had already decided it was constitutional for the federal government to support and build roads.

Between 1790 and 1860 the federal government spent a total of $54 million on transportation improvements. Table 5 presents Malone's tabulations of federal expenditures by type and time. By far the largest share of federal expenditures went to rivers, harbors, and aids to navigation, all explicitly allowed in the constitution. The single largest project was the National Road, which grew out of the promise made to Ohio to spend a portion of the revenues derived from land sales on roads. But of $9 million on roads, plenty went to short roads built within one state. When Andrew Jackson vetoed the appropriation for the Maysville Road in 1830 on the "constitutional" grounds that it lay entirely in Kentucky (and was the route home for his arch political rival Henry Clay), he conveniently ignored the precedent of many similar grants that had already been made.

How important were federal transportation expenditures? State and local governments spent over $450 million on transportation projects, nine times federal expenditures. Most of the federal spending went to small rivers and harbor improvements and light houses, only a few were projects like the National Road. Why did the federal government accomplish so little? The main reason can be found in the kind of projects they did fund. "Rivers and Harbors" bills contained lots of small projects for congressional districts scattered around the country. No section, east, west, north, or south was willing to support a large appropriation that would go exclusively to one region. The Bonus Bill vetoed by Madison in 1817 would have taken the $2 million bonus (charter fee) paid to the federal government by the Second Bank of the United States and divided it among the states on the basis on Congressional representation -- the share distributed to each state was equal to its share in the total number of Senators and Representatives.[23] Henry Clay and John Calhoun, the bill's sponsors, wanted to create a fund to spend the money on projects in any state, but Congressional opponents would not support the bill until it was clear that every state would get some money (even then the bill passed by just a few votes).[24] Three more times, in 1832, 1836, and 1841 Clay was able to get a "distribution" bill that allocated federal land sale revenues among the states on the basis of Congressional representation. But these bills amounted to very little; every state got a small amount and the federal government put no projects in place.[25]

The public lands were always closely related to internal improvements. Land values rose when transportation improvements were made. The federal government adopted a system of public land sales in 1785 and 1787, before the Constitutional convention, that was designed to maximize revenues from land sales (see Gary Libecap's paper in this volume). Land sales were rarely an important source of federal revenue. Only in land booms, as in 1818, 1836, and 1854, did land sales approach 20 percent of federal revenues, and in most years were well below 10 percent. The original system offered land for sale in open auctions, in minimum size parcels of 640 acres at a minimum price of $2.00 an acre, with the option of buying land on credit. There were no limits on the maximum size purchase. Between 1785 and 1841, a series of acts gradually lowered the minimum size purchase, from 320, to 160, to 80 acres. The minimum price was lowered to $1.25. Credit sales were abolished in 1820 when it became clear that most of the people who bought on credit did not pay up. Preemption -- occupying land without title -- was illegal but widespread throughout the west. Dislodging farmers who had built farms on preempted land was politically unpopular, and after a series of preemption acts that recognized the rights of preempters to buy land at the minimum price, the federal government finally gave up and made preemption permanent in 1841.[26] At that point the federal government accepted that revenues from land sales would never amount to much.

What did these changes in land policy mean for economic development? Almost nothing. Land policy itself was very important, but the shape of land policy was in place by 1787 and the changes after that date were minor. Smaller minimum purchase sizes had some effect, but individuals could still purchase larger parcels. Preemption was not a significant change, since the government had rarely been willing to evict occupants without clear title, and had set a definite precedent of negotiation. Feller concluded his history of federal land policy between 1790 and 1841 this way: "Considering its central place in the Jacksonian debate over political economy, federal land policy did not change much during those years."[27]

The fact that little was done in the area of land policy and internal improvements does not mean that nothing was proposed or discussed. Appendix I gives major land and internal improvement legislation that came before Congress between 1790 and 1840. The table lists 48 pieces of legislation, although not all were passed. There were bills to give the public lands to the western states, bills to give the revenues to states for education, and bills to distribute land revenues to support internal improvement. As with internal improvements, there was a continual conflict between western states with public lands within their borders and wealthy eastern states with no public land but a desire to see federal land revenues shared.

Slavery was the third area of federal responsibility (shared with the states) where much was debated and little was changed. The focal debate over slavery in Congress involved the process of creating territorial governments in the west from which new states would form. If a territory was allowed slavery then the territory was likely to allow slavery when it became a state. If slavery was prohibited in a territory, it the territory was likely to prohibit slavery when it became a state. Debates over slavery were inextricably linked to land policy, established in the land ordinances of 1785 and 1787. The 1787 "Northwest Ordinance" governed settlement in what would become the states of Ohio, Indiana, Illinois, Michigan, and Wisconsin. Article VI of the ordinance stated "There shall be neither slavery nor involuntary servitude in the said territory, otherwise than in the punishment of crimes,... *Provided always*, That any person escaping into the same, from whom labor or service is lawfully claimed in any one of the original States, such fugitive may be lawfully reclaimed, and conveyed to the person claiming his or her service as aforesaid."[28] Because the Ordinance preceded the federal constitution, there was no room for debate about slavery in the northwest, nor was their any doubt that the federal government was committed to enforcing fugitive slave laws.

Kentucky was created in 1791 out of the state of Virginia, so federal public land law never applied there. North Carolina ceded Tennessee to the federal government in 1790. The terms of the cession allowed all existing private claims to be honored, and most of Tennessee had been sold or granted to private individuals. The cession required that Congress "assume the government of the said ceded territory, which they shall execute in a manner similar to that which they support in the territory west [sic] of the Ohio; ... *Provided always*, That no regulation be made or to be made by Congress shall tend to emancipate slaves."[29] In 1798, Congress created the Mississippi Territory, encompassing the land that would become Alabama and Mississippi, stating that "the President of the United States is hereby authorized to establish therein a government in all respects similar to that now exercised in the territory northwest of the Ohio, excepting and excluding the last article of the ordinance made for the governance thereof by the late Congress, on the thirteenth day of July, one thousand seven hundred and eighty-seven."[30] The last article of the Northwest Ordinance was Article VI, prohibiting slavery. Land and slavery in Kentucky and Tennessee were set aside from federal control by the Virginia and North Carolina grants. In the northern arm of western settlement slavery was prohibited, in the southern arm of western settlement slavery was allowed.

The first big crisis came when Missouri petitioned for admission as state in 1820. Missouri was the second state created out of the Louisiana purchase, Louisiana was the first in

1811. The terms of the Louisiana and Orleans Territorial Act, 1804, prohibited importation of slaves into the territory from outside the United States, prohibited the importation of slaves into the territory from the United States if they had been imported into the United States after 1798, but allowed the importation of slaves into the territory from other states in the Union as long as it was done "by a citizen of the United States removing into said Territory for actual settlement, and being at the time of such removal *bona-fide* owner of such slave or slaves."[31] It was legal to bring slaves into Missouri and people did. The question raised in 1820 was whether slavery would be allowed in the remainder of the Louisiana Purchase. The Missouri Compromise, engineered by Henry Clay, brought Missouri into the Union as a slave state, brought Maine into the Union as a free state (Maine was originally part of Massachusetts), and prohibited slavery "in all that territory ceded by France to the United States, under the name of Louisiana, which lies north of thirty-six degrees and thirty minutes north latitude, not included within the limits of the state contemplated by this act."[32]

The Missouri compromise acknowledged the "balance rule," that slave and free states should have equal numbers in the Senate. The compromise governed settlement in Minnesota and Iowa (free) and Arkansas (slave), and put off until the 1840s the question of what would be done with land further to the west. The recognition, then annexation and admission of Texas as a slave state in 1845 created another intense debate between the south and north, which escalated with the Mexican American war. Ultimately another round of compromise was reached in 1850, the last of the famous compromises arranged by Henry Clay, in which California was admitted as a free state to balance Texas. In the 1850s the status of the Kansas-Nebraska territory sparked a crisis that could not be resolved by compromise, and led the nation into war.

Did federal policy regarding slavery change at all through these crises? The answer, as with public lands and internal improvements, has to be no. The federal government decided to draw the line for slave and free territories in 1820, beyond that it debated, argued, and finally broke up, with exactly the same policy put into place in 1787.

In three other major areas of federal responsibility - import tariffs, banking, and defense/international affairs -- the federal government did take action. In all three areas the Constitution gave sole responsibility to the national government. Federal tariff and financial policies were intertwined from the beginning by Alexander Hamilton's proposal for funding the revolutionary war debt, putting the government on a sound financial footing, and promoting the development of American trade and manufacturing. Hamilton's plan refunded most of the existing federal and state debt from the revolution, that is, new bonds were created and traded for existing bonds. A national bank, which issued its own currency, was created to act as the federal government's financial agent, where federal tax receipts would be deposited and where checks were drawn for expenditures (including payments on the national debt). Finally a set of import tariffs were imposed, both to generate revenues and to protect manufacturing.[33]

All three elements of the plan were passed by Congress and signed by President Washington, despite intense debate and opposition. Attorney General Randolf and Secretary of State Jefferson thought the Bank was unconstitutional. Their arguments turned on the power of the government to create a corporation, a power the Constitution had not explicitly enumerated and, therefore under the reserved powers clause, a power possessed by states but not the national government. Hamilton argued, successfully, that the power to create a corporation was inherent in the powers of a sovereign government:

> The latter [Randolph], expressly admits, that if there is anything in the bill which is not warranted by the Constitution, it is the clause of incorporation.
>
> Now it appears to the Secretary of the Treasury [Hamilton] that this *general principle* is *inherent* in the very *definition* of government, and *essential* to every step of the progress to be made by that of the United States, namely: That every power vested in a government is in its nature *sovereign*, and includes by *force* of the *term*, a right to employ all the *means* requisite and fairly applicable to the attainment of the *ends* of such power, and which are not precluded by restrictions and exceptions specified in the Constitution, or not immoral, or not contrary to the *essential ends* of political society.[34]

Hamilton's Constitution contained an implicit and inherent grant of power to the federal government sufficient to perform the functions it was assigned in the Constitution. There was no doubt the federal government was given the power to regulate the emission of "bills of credit," that a common form of bills of credit were bank notes, and that banks typically required corporate charters in order to operate. But you can see how Hamilton's reading of the Constitution differed from Jefferson. Hamilton saw limits on the federal government in the Constitution only where there were explicit restrictions, where Jefferson saw powers given to the federal government only where there were explicit grants. The two positions remain poles of argument today.

The federal government did charter the Bank of the United States (BUS) in 1792. The bank had branches throughout the country, issued its own bank notes, served as a depository for federal tax receipts (mostly customs as we have seen), and moved federal funds around the country through its branch system as needed to meet federal needs. Revenues were collected primarily in seaports in the northeast and New Orleans, while the bulk of expenditures was for military defense, much of it on the frontiers. The BUS enabled the government to perform these functions efficiently and at low cost. The BUS was a private corporation whose stock was owned, in part, by the federal government.

Congress failed to renew the BUS charter when it expired in 1812 and federal government financing of the War of 1812 suffered as a result. In 1816, Congress passed a bill chartering a new Bank of the United States (known as the Second BUS). President Madison signed the bill chartering the bank despite his history of constitutional concerns, acknowledging that experience had proven the bank useful and constitutional. Both the First and Second banks provided an important link the in the development of a nationally integrated financial system. The bank notes of the branches of the BUS were accepted at par (face value) at all branches of the system, providing the country with a uniform paper currency. The notes of state chartered banks tended to trade at a discount that increased with the distance of the note from its issuing bank. As important, the BUS facilitated the movement of payments between the regions of the country in the process of carrying out its role as the agent of the federal government. The BUS bought bills of exchange in different regions and delivered them for payment at their maturity. Because the BUS was involved in every region of the country, it could turn a tidy profit on the business at the same time that it provided a more orderly market for these critically important financial instruments.

The charter of the Second BUS expired in 1836. When Congress renewed the charter in 1832, the renewal was vetoed by President Jackson. Although Jackson attacked the bank on constitutional grounds, the force of his argument lay on privileges exercised by the bank. These extensive privileges and profits, some of which went to foreign stockholders, made the bank a "monster of corruption." There would not be a national bank again until 1914, although the federal government would resume chartering banks in 1863 under the National Banking Act (see Richard Sylla's essay). The federal government did try to promote economic development by chartering a national bank, Hamilton laid out the rational and drew up the blueprints in 1790. But a national bank always generated lots of political opposition, and the federal government was unable to sustain the national bank in 1812 and again in 1832.

Tariffs were different, if only because the government relied on them for 85 percent of its revenues before 1860. Hamilton proposed moderate tariffs. He wanted an import tariff both to raise revenues and to promote manufacturing development. Tariffs that were too high provided protection, but no revenue. Tariffs that were too low provided neither revenues nor protection. Hamilton's proposed tariffs were generally implemented by Congress in the 1790s.[35] Measuring tariff rates is complicated by several factors. Tariffs can be imposed on units, weight, or value; and tariffs vary from product to product. So the overall burden of tariffs depends on how the tariffs are imposed and what goods they are imposed on.

Figure 11 gives tariffs as a share of dutiable value of imports (that is the official value on which the tariffs were levied) from 1821 to 1955. Tariffs rates rose from the 1790s to the 1820s. There was pressure to increase tariffs from manufacturing interests in the northeast and pressure to reduce tariffs from the cotton exporters in the south. Pressure for tariffs peaked with the "tariff of abominations" enacted in 1828. Tariff rates as a share of dutiable value were highest in 1831, 61 percent. Exporting interests always opposed high tariffs, but the tariff of abominations brought extraordinary opposition from the south. In 1832, South Carolina "nullified" the tariff, refusing to allow it to be collected with its borders. President Jackson threatened South Carolina with military occupation if they did not back down, vehemently denying any state's ability to nullify a federal act.[36] Again, Henry Clay arranged a compromise in 1832 that allowed South Carolina to rescind nullification without an invasion of federal troops, but in the "Force Act" gave the President the authority to use force should it be necessary, and promised to reduce tariff rates by 10 percent per year for the next ten years. Clay's compromise ended the nullification crisis, but it also signaled the end of the protective tariff as an active policy tool to promote development. Tariff rates declined steadily from 1832 to 1860.

The federal government started out the 1790s with the power and the tools to promote economic development through banks and tariffs. Wielding those powers, however, was politically controversial. By 1832 and the ascendance of the Jacksonian Democrats, the federal government backed away from both a national bank and a protective tariff. Only in the third area of undisputed federal policy, did the federal government continue to forge an active policy.

We have already seen the importance of land to the early 19th century American economy. Between 1790 and 1867, the land area of the United States almost quadrupled. The nation occupied 525 million acres after the Revolution. The Louisiana Purchase in 1803 added 523 million acres, the annexation of Texas in 1845 added 247 million acres, the Oregon Compromise with Britain in 1846 added 180 million acres, the Treaty of Guadalupe Hidalgo that ended the Mexican American war added 334 million acres, and the purchase of Alaska in 1867 added 365 million acres.[37] This dramatic expansion into the west was the fruit of diplomatic negotiation and war. Not all of attempts to increase the size of the United States were successful, the War of 1812 began with an failed invasion of Canada. We have already seen with slavery that the movement into western lands always involved internal debate about how land should be acquired and who should settle it. But from its inception, the federal government carried out an active program of expanding the country, and, through Army expenditures on the frontier (the single largest item in the federal budget) provided security and government along the western expanse.

In 1790, the federal government possessed the constitutional powers to promote economic development through public land policy, internal improvement investments, banking and financial investment, tariffs, and international expansion. Federal land and slavery policies hardly changed at all from 1790 to 1860, and the federal governments efforts in the field of transportation were negligible, less than a ninth of state and local investment. Hamilton's blueprint for economic development included federal action in banking and a protective tariff, both of which were enacted, but by 1832 those policies had been eclipsed by political opposition. Only the drive to add more land continued unabated from 1790 to 1860, but the development of the new lands in the west, and their connection with established areas in the east, both through transportation and financial systems, would depend on actions taken by state governments.

V. State Governments and the Promotion of Economic Development

It is easy to see why historians focus on the federal government. States did nothing so exciting as making war on the British, the Mexicans, or the Indians; did not decide the fate of any manufacturing interests by setting tariffs; did not distribute hundreds of millions of acres of public land; and did not decide whether or not there would be a national bank. Successful state politicians aspired to be Senators, no Senator aspired to be a Governor. The federal constitution prohibited states from declaring war, conducting international relations, regulating the currency or emitting bills of credit, levying a tariff or otherwise effecting international trade or even domestic trade across state lines. The federal government was the only government involved in the expanding the nation's boundaries in the west. How could states possibly influence the pace and pattern of economic growth in the early 19th century?

The process of opening the west required enormous resources and turned the economic focus and energies of the country inward. In comparison to the colonial economy, which revolved around international exports and imports, the 19th century economy became increasing independent of foreign markets. The major economic opportunities were within the United States, not outside of it, and the most important, and potentially profitable, investments were in transportation and finance. The role of states in finance and transportation far outstrips the federal government in importance. Despite constitutional restrictions on regulating the currency and emitting bills of credit, the financial system that arose between 1790 and 1860 was based on banks not only chartered by state governments, but in some cases owned by state governments. Nine out of every ten dollars spent on public transportation investment came from state and local governments. By 1860, portions of transportation system, particularly in the east, were passing out of the hands of states and coming under private control, but that should not blind us to the origins of the nation's transportation system in state promotion. Banking was always under the control of state governments, with the exception of the two Banks of the United States, and it was not until 1863 that the federal government took an active role in chartering and regulating banks. State governments were at the center of the development process.

There were no banks in America before the revolution. States began chartering banks in the 1780s and 1790s. At first the numbers were small, but they increased steadily with time. By the 1830s there were over 600 state chartered banks with a capital of over $400 million dollars.[38] A corporate charter endowed the bank with limited liability, which was important to bankers whose profits came mainly from borrowing money in the form of bank notes. The legal ability to issue bank notes soon became a privilege that required a bank charter. Bank charters were valuable licenses to engage in a profitable activity. It is not surprising that the first banks often gave the state ownership shares in the bank as part of the cost of obtaining the charter. Massachusetts, New York, Pennsylvania, Maryland, Virginia, and South Carolina all came to hold a financial interest in banks in this way. As we pointed out earlier, dividends on bank stock were an important element in the revenues of state governments in the east.

Once a state acquired an ownership interest in a bank, it faced conflicting incentives when asked to charter a second bank. The profitability of a bank depended, in part, on competition. As more banks were chartered, rates of return on the capital invested in individual banks declined. Existing banks opposed the formation of new banks, but states were constantly asked to open new banks, particularly in developing areas where financial systems were primitive (for example, the western parts of New York and Pennsylvania in the 1810s.) States that held large amounts of stock in existing banks were less likely to charter new banks, as happened in Pennsylvania. Other states, like Massachusetts, decided to sell their bank stock and tax bank capital. These states tended to have many more, and smaller, banks.[39] By the 1810's all of the states on the eastern seaboard were promoting or involved in banking in some way.

In places like New York, Philadelphia, Baltimore, and Boston there were many groups of businessmen who aspired to have a bank. In these places states could sell bank charters and receive substantial revenues from doing so. In per capita terms, there were more banking services in the northeast than in the rest of the country. That is, more bank notes per capita, more bank credit, more bank capital, etc.[40] Moving west and south from the northeast, however, the size and sophistication of commercial centers decreased (the exception was New Orleans), the number of banks decreased, the number of farmers increased, but the need for banking services did not decline. States in the south and west wanted banks just as much as New Englanders, but the low density of population, the high share of farmers, and the geographic concentration of crops meant that banking was riskier. Banks in Mississippi, for example, made loans on cotton, both direct to farmers to plant crops and by discounting bills of exchange to facilitate getting the crop to market. If the cotton crop failed or cotton prices collapsed, banks in Mississippi were in trouble. The ability to diversify banking risk in Mississippi was limited, unlike banks in major eastern commercial centers with many opportunities to diversify their risk. The same was true in the northwest, except there it was markets for wheat, corn, and other grains that mattered.

States in the south and west responded in two way. First, states invested their own funds in banks, providing bankers with larger amounts of public capital (as opposed to the early eastern states who usually received bank stock as part of the charter process, and did not put state funds *into* the bank.) Second, there were fewer banks and the banks tended to be larger. Table 6 gives the number of banks, total capital, and capital per bank for each state in 1837, and, in the lower panel of the table, each region's share of the national total of all banks, all bank capital, and, in each region, the average capital per bank. Western states had many fewer banks. Ohio and Louisiana are the only states west of the Appalachians with more than ten banks, and they are the two oldest and most developed western states by the 1830s. Most frontier states had four banks or less.[41] Southern states in general had larger banks than northern states, but in both the north and the south banks were much larger in the west than in the east. Banks in the southwest had ten times the average capital of banks in New England.

The last three columns of the table provide some insight into state investment in banks in the west. Column 4 gives the amount of state debt incurred to invest in banks up 1837. Only states in the frontier south and west invested in banks. Column 5 gives state investment as a share of total bank capital. With the exception of Kentucky, state governments provide more than half of bank capital in each of these states.[42] State involvement was critically important to the development of banks in the south and west. Column 6 gives the share of all state borrowing that went to investments in banks. We'll return to this shortly.

The First and Second Banks of the United States were extremely important to the development of American financial systems. They spanned the country with their branches, provided a uniform paper currency, and stabilized the conduct of federal financial activities. But they were not the only, or even the most important elements of the banking system that developed in the early 19th century. By 1836, state chartered banks had ten times the capital of the Second Bank. When the Second Bank lost its charter, it was quickly rechartered as the Bank of the United States of Pennsylvania. The banking system continued to develop without a national bank, and there is no reason to believe that the banking system would not have developed before 1836 if there had not been a national bank.

State chartered banks where the heart of the developing American financial system. In the northeast, private banking interests approached state governments and were willing to pay for charters. State banking policy in New England and the Mid-Atlantic regions promoted development by facilitating the creation of banks, the capital came from private sources. In the south and west, states played a much more active role in providing capital and organizing banks.

State involvement in transportation investment has as a long history as well. By the 1780s, states were chartering private companies, providing subsidies, and purchasing stock in canal, bridge, road, and turnpike companies.[43] Virginia chartered the Potomac Company and the James River Company in 1785 and the Dismal Swamp Company in 1790. In 1792, New York chartered two companies, the Western Inland Lock Navigation Company and the Northern Inland Lock Navigation Company, to open canals to Lake Ontario in the west at the St. Lawrence in the north via Lake Champlain. Maryland chartered the Chesapeake and Delaware canal in 1799. By 1811, Pennsylvania had spent $825,000 to build turnpikes. Massachusetts also invested in turnpikes. Unlike their investments in banks, however, transportation projects were rarely profitable investments for state governments. For a few brief years around 1805, it appeared the federal government might get involved in transportation. Jefferson's second inaugural message, cited earlier, led Congress to ask the Secretary of the Treasury, Albert Gallatin, to prepare a report laying out a possible system of internal improvements. Gallatin's famous report proposed a network of canals that would have connected the disparate parts of the country at a cost of over $20,000,000. Most of the projects envisioned in the report were eventually carried out in one form or another by state and/or private interests, but the federal government spent very little on transportation before the 1820s (see Table 5).

Despite federal inaction, there was widespread support for internal improvements. In 1811, the New York legislature authorized the issue of $5,000,000 in state bonds to build a canal; a plan sidetracked by the outbreak of the War of 1812. Virginia created a Board of Public works in 1816. In 1817, after failing to receive federal support, New York embarked on the largest infrastructure project of its time, the Erie Canal. The canal turned out to be a phenomenally successful investment. Completed in 1825, it soon returned funds to the state over and above maintenance costs and interest payments. Now it appeared canals could prove as profitable as banks. The pattern of state transportation investment, after the Erie success, was influenced by two factors.

The first was geography. Areas with access to ocean transportation did not need to build canals, although they often improved their rivers and built short canals to bring their interior regions into contact with ports. The real payoff was the construction of interregional canals, like the Erie, that reached into the northwestern interior. In the late 1820s Ohio, Pennsylvania, and Maryland started canals, all with hopes they would pay for themselves and return a handsome dividend to the state treasury. Virginia, South Carolina, and Georgia contemplated projects that would open up routes into Tennessee and Kentucky.

The second factor was the youth of western states. Indiana became a state in 1816, Mississippi in 1817, Illinois in 1818, Alabama in 1819, and Missouri in 1820. Indiana was the largest of those states in 1820 with a population of just 147,000. It was not until the early 1830s, that western populations, swelled by rapid migration population inflows, and western state budgets, spurred by the rapidly expanding economy and the boom in federal land sales, enabled these young states to contemplate transportation investments of their own. In 1836 and 1837, Indiana, Illinois, and Michigan started new canals and railroads systems. In the same years, New York, Ohio, and Pennsylvania committed to expanding their existing systems. Rising western populations raised land prices; rising land prices stimulated public land sales; increased sale of public land raised the property tax base; and states began to think they could afford to build better transportation systems, which would further raise land prices, increase land sales, and expand the property tax base. The direction of causation in this story is difficult to disentangle, but all the factors came together to produce a major economic boom in the 1830s.

The boom affected southwestern states, just as it affected northwestern states, but southern states were not in need of major transportation investments. Their already navigable rivers ran to the sea. In the south, banks dominated state investments. Louisiana invested $23 million in banks beginning in 1824. Alabama, Georgia, and Florida made substantial investments in the early 1830s, while Mississippi and Arkansas committed millions to banks in 1837 and 1838. As table 6 shows, moving west from Florida, into Alabama, Mississippi, Louisiana, Tennessee, and Missouri more than half of the banking capital in each of these states by 1837 came from state investment and almost all of the debt in these states was issued for the purpose of investing in banks.[44] Northwestern states needed banks too, Illinois and Indiana made significant investments in their state banks.

States had always borrowed money to finance long term capital projects. But the pace of state borrowing increased dramatically in the 1830s. State debts expanded from a few million in 1820, to $80 million in 1830, and $200 million in 1841. Figure 12 gives state debt issued each year in the 1830s. The relative size of some of the state debts is truly amazing. In 1836, Indiana, with a population of roughly 600,000 and a state budget of $50,000 a year, authorized a bond issue of $10,000,000 in 5 percent bonds. Michigan, with a population of no more than 200,000 and state revenues of $17,000 in 1836, authorized a bond issue of $5,000,000 of 5 percent bonds in 1837.[45] Earlier we saw the implications for tax revenues in Indiana. Per capita tax revenues in the 1840s were ten time higher than they had been in the 1830s. Total and per capita state debts outstanding in 1841 are given for each state in Table 7.

In 1837, the American economy was hit by a financial panic and in 1839 a depression began that lasted until 1843. Many of the transportation and banking projects of the western states were abandoned. Indiana, Illinois, Michigan, Arkansas, Louisiana, Mississippi, Florida (still a territory), Maryland, and Pennsylvania stopped paying interest payments on their state bonds in 1841 and 1842. Mississippi and Florida formally repudiated their bonds, while Louisiana, Arkansas, and Michigan ultimately failed to repay part of the money they had borrowed. The other states eventually resumed payments on their bonds, and in the end repaid all of the principle and most of the back interest.[46] New York, Ohio, and Alabama narrowly avoided default.

It is tempting to think of the "canal" boom of the 1830s as the result of naive western states optimistically thinking they could borrow to build canals, railroads, and banks and live off the dividends and tolls. Such a view is inconsistent with the history recounted in this section. States had been deeply involved in the creation of banks and transportation companies since the 1780s. In the case of banks, state involvement had proven profitable, in the sense that states who owned stock in banks received substantial and steady dividends, and those states that taxed banks earned a hefty share of state revenues from bank taxes. In the case of transportation, until the Erie canal, state investments had rarely been directly profitable, but there is little reason to doubt that the overall returns to the state treasury in terms of higher property tax revenues on increased land values made these good investments.[47] What happened after 1839 was an unexpected economic depression, that was caused, in part, by the terrible fix the states found themselves in.

States reacted predictably to the immediate crisis. New York passed a "Stop and Tax" law in 1842: stop construction on the canals and reinstate the property tax. Indiana's new constitution, passed in 1851, left it up to the voters to ban banking entirely (they chose not to) and made it unconstitutional for the state to borrow to finance internal improvements. But by and large this "revulsion" against internal improvements was temporary. What changed permanently was the way states approached the process of promoting economic development. Already in 1837, Michigan and New York had adopted "free banking." Under a free banking act, anyone could obtain a bank charter who met minimum requirements for capital investment. Free banks were regulated, the "free" referred to entry, not to regulation. Twenty states had free banking systems by 1860. The corollary to free banking in manufacturing and other sectors of the economy were general incorporation acts. In every state in 1790, a corporate charter could only be obtained by an act of the state legislature. This made charters valuable, as we have seen, but it also raised the possibility that business interests and politicians would conspire to limit competition. This was always a problem if the state relied on corporate charters or investment dividends for revenues, as we saw earlier as well. Eleven states adopted general incorporation clauses in their constitutions in the 1840s, and ___ states had general incorporation acts in place by 1860 (Evans). When states began moving toward free banking and general incorporation, the importance of asset income necessarily declined, and state property taxes rose in importance as a share of state revenue, as shown in Table 3.

The depression of 1839 ended state investment in transportation in some states. Indiana, Illinois, Michigan, and Maryland wouldn't spend a penny on transportation until well after the Civil War.[48] But voters in New York approved a bond issue to complete the canal system in 1850 (?). Ohio struggled through the 1839 depression to finish its canal network. Louisiana, despite being in default on bank bonds issued in the 1820s, borrowed in national and international capital markets in to build railroads in the 1850s. Nobody would lend money to

Mississippi or Florida, but Missouri borrowed millions to build railroads in the 1850s.

Active promotion of economic development shifted in the later 19th century from state to local governments. In 1841, state government debt was eight times local government debt. Almost all of the debt was incurred to invest in banks, canals, and railroads. In 1902, when the first complete census of American governments was taken, local government debt was eight times state debt. Local debt was, as before, primarily for economic development: railroads; water and sewage, public power, and education. American governments kept promoting economic development, but the level of government changed

VI. Conclusions

The history of American government cannot be written without writing the history of American governments. Policies to promote of economic development move from one level of government to another constantly through the nation's history. In 1776, there were fourteen individual government policies, not one. By the 1830s there were 26 states, each pursuing its own development agenda. By the end of the 19th century local governments had taken the lead in infrastructure investment. In 1940, when a complete count of the number of governments was taken, there were 140,000 governments in the United States (today there are about 80,000). Keeping track of how the American government interacts with the economy first requires that we keep track of what all American governments are doing.

From the nation's very beginnings in 1776, state governments took the lead in economic policy, not the national government. The Articles of Confederation gave the federal government a monopoly over defense and international relations, but power over very little else. Such a weak central government could not provide even the basic service, national defense, required of it. The second Constitution, written in 1787, created a stronger national government, a government possessing its own independent source of tax revenues. The Constitution gave the national government the sole power to conduct international affairs and military defense, to regulate the currency, to regulate international trade, and to disperse the western lands. At the same time, the Constitution hemmed in the national government by granting unenumerated powers to state governments.

In the 1790s, the federal government set up an active policy of financial promotion and protective revenue tariffs. Tariffs account for 85 percent of federal revenues, and military defense over 52 percent of federal expenditures. But using the tariff to actively promote American manufacturing raised substantial political opposition, and after the tariff of abominations in 1828, tariff rates gradually declined and talk of using the tariff as a means of economic development disappeared. The two federally chartered banks did exert a regulating influence on the money supply between 1792 and 1836, but they also generated intense political opposition. Congress failed to renew the first bank's charter in 1812, and could not over ride President Jackson's veto of the charter renewal in 1832. The main function the federal government continued to provide was military defense (and at times military offense) and international relations.

It was the states that developed active policies to promote economic development by encouraging public and private investment in banking and transportation. State development policy began taking shape in the 1780s and continued to grow in size and importance. States were often investors in early banks, and in several eastern states banks became an important source of state government revenue. As western states entered the Union, they too sought to develop banks and canals. Frontier states invested heavily in banks in the 1820s and 1830s. Following the success of the Erie Canal, eastern states like Pennsylvania, Maryland, and Massachusetts began canal and railroad projects, followed in the 1830s by a wave of transportation investment in the north west. In the economic depression that began in 1839, many of these western state projects in banking and transportation came to a bad end. States in some parts of the country began receding from active investment, although others continued to actively invest right up to the Civil War.

In the 1840s, following the default crisis, states began putting in place arrangements that made it easier for corporations to form and guaranteed equal access to corporate charters for all members of the economy. Free banking laws and general incorporation acts implemented these policies. Many states wrote explicit provisions into their constitutions requiring legislators to write general incorporation acts. The result was a growing number of corporations and banks, throughout the country.

Throughout the early 19^{th} century, the federal government wanted to promote economic development, but found the political complexity of reaching a consensus about what should be done too daunting. Federal policy changed very little, except to recede from development promoting policies, between 1790 and 1860. State governments, on the other hand, actively experimented with new ways to promote development, to help farmers get their goods to market with better transportation and finance, and to raise land values, which helped the farmers and the state treasuries that depended on the property tax. Not everything they tried worked and some of their projects failed spectacularly. But the idea that government should play a positive role in the economy was never seriously challenged, although it was often intensely debated.

Endnotes

1.See Adams *Diary and Autobiography*, Butterworth, ed. III, pp. 335-37.

2.This essay neglects two important areas of government action: education and the law. State governments provided a minimum amount of support for public education before 1860, but local governments, with wide variety across the country, began moving towards public schools. Both state and federal courts made large contributions to the promotion of economic development. Two features stand out. First, by the lights of the early 19th century, the courts were independent and unbiased. The "rule of law," the idea that governments should be of laws not men, and particularly that governments and politicians should abide by the same laws they made for everyone else was an important ideological element in the American legal system. Second, judges and the bar thought systematically about how law affected the economy, and consciously and effectively began changing the structure of American common law to "release energy" in the words of James Willard Hurst.

3.For a discussion of the first state constitutions see Paul, Lutz, Tarr, Green, and Kruman. Kruman is particularly valuable as an antidote to the idea that the first state constitutions were simple minded and gave too much power to legislatures, an idea articulated by Wood.

4.For the ever changing state of suffrage see Keyssar. Judicial independence was a principle of American constitutional theory, but as in the national constitution, the actual form that judicial institutions took was initially a legislative rather than constitutional matter. Over time states adopted much more specific constitutional forms of judicial systems, while the national government has left the federal judiciary to the Congress.

5. From the very beginning, ownership and distribution of western lands were contentious issues. Virginia's extensive claims in the west caused the most difficulty.

6."All charges... shall be defrayed out of a common treasury, which shall be supplied by the several States, in proportion to the value of all land within each State, granted to or surveyed for any person, as such land and the buildings and improvements thereon shall be estimated according to such mode as the United States in Congress assembled, shall from time to time direct and appoint." (Article VIII).

7.Congress was able to decide some matters by a simple majority, and others by a super majority of nine states (Article IX), but changes in the Articles required unanimous agreement, "And the articles of this confederation shall be inviolably observed by every State, and the Union shall be perpetual; nor shall any alteration at any time hereafter be made in any of them; unless such alteration be agreed to in a Congress of the United States, and afterwards confirmed by the Legislatures of every State" (Article XIII).

8.The story of national finances during the war and after is told in Ferguson, *Power of the Purse*.

9.The table is based on Wallis, 2000. The federal numbers are accurate, the state numbers are reliable but not completely accurate, and the local numbers are rough guesses at best.

10. Adjusting for inflation would have some effect on these numbers, but the basic features would still remain.

11.Repaying the principle on government debts is clearly an expense for the government, but it is not treated as an "expenditure" in the government accounts. To do so would double count the borrowed money. If the government borrows $100 to build a bridge, the construction costs are counted as an expenditure. If the repayment of the $100 principle was also counted as an expenditures, then total expenditures would be $200, when the government really spent just $100. Interest payments on debts are an expenditure. In a similar way, borrowed funds are not counted as revenues.

12.Slaughter, *The Whiskey Rebellion*.

13.The four states are regionally representative and are ones for which we have relatively complete data. Individual state revenues are weighted by population to construct the average in the figure.

14.See Goodrich's *Government Promotion of Canals and Railroads* for a history of transportation investment in the states.

15. Wallis, Sylla, and Legler [1994], p. 126. We do not have adequate fiscal data on Alabama and Gerogia, but see Brantley [1961] for Alabama and Wallenstein for Georgia.

16.For the cost of farm building see Atack and Passell. For the share of capital held in the form of land improvements see Gallman.

17.This type of bill of exchange was often a "sight" bill, meaning that the agent's representative in New York had 60 days from the presentation of the bill, the sight, to pay cash.

18.The price differentials are taken from Thomas Berry *Western Prices*, the prices in New York and Philadelphia from *Historical Statistics*.

19.See the discussion in Scheiber, p.   Ohio and New York worked together to get freight on their systems.

20.The federal government minted gold and silver coins, but did not print any paper money until the Civil War.

21.The distinction in this argument may be a bit difficult to follow. The Constitution declares itself the law of the land, but is vague on how that works. Eventually the Supreme Court asserted its power to be the ultimate arbiter of what is and is not constitutional, but that is not a power delegated to the Supreme Court in the Constitution. Presidents Madison (the Bonus Bill in 1817) and Jackson (the Maysville Road bill in 1830) both vetoed important Congressional legislation on the grounds that it was "unconstitutional," but their stands (particularly Jackson's) appear to be motivated more by political than constitutional objections. By that we mean that earlier and later Congresses and President's passed and signed legislation that did exactly what Madison and Jackson had vetoed without changing the Constitution. Madison and Jackson's assertion that something was unconstitutional were simply that, assertions. But their statements carried considerable weight at the time, since no one had yet figured out just how a Congressional Act or state law was to be declared "unconstitutional."

22.Richardson, *Messages and Papers of the Presidents,* Vol. I, p. 367.

23.The formula had a slight bias toward small states, since every state had two Senators, but Representation varied with population.

24.Clay and Calhoun knew that their bill would be defeated if they proposed to spend most of the $2 million in, say, Kentucky and South Carolina, so they fought to the very end to not specify the projects that the money would be spent on in the bill. See Larson, 2000.

25.The 1836 distribution act allocated the federal surplus (it turned out to be $36 million) generated by the extraordinary land sales in 1835 and 1836, see Figures 1 and 2. The 1817 Bonus Bill would have allocated the $2 million bonus and the dividends on federal stock in the BUS. The 1841 Land Act would have allocated land sales revenues, net of land office costs, among the states. Land revenues averaged about $2 million a year.

26.This was the same bill that distributed land sales revenues to the states. The distribution privilege was tied to the tariff, and President Tyler raised the tariff in 1843 and ended distribution.

27.Feller, *Public Lands,* p. 194.

28.*An Ordinance for the government of the territory of the United States northwest of the river Ohio*. Confederate Congress, July 13, 1787. As reported in Poore, p. 432.

29.First Congress, Second Session, Poore, p. 1664.

30.Fifth Congress, Second Session, Poore, p. 1050.

31.Eight Congress, First Session, 1804, Poore, p. 694.

32.*Enabling Act for Missouri*, Sixteenth Congress, First Session, Poore, p. 1104.

33.Hamilton's plans were laid out in a series of Reports to Congress: First Report on the Public Credit, January 14, 1790; Report on a National Bank, December 14, 1790; Report on Manufacturers, December 5, 1791; and Second Report on the Public Credit, January 16 and 21, 1795. These are conveniently reprinted, along with Hamilton's letter to President Washington on the Constitutionality of the National Bank, in McKee.

34.Hamilton's letter to Washington on the Constitutionality of a National Bank, McKee, p. 101, emphasis in the original.

35.See Irwin, 2003, for the success of Hamilton's tariff plan in Congress.

36.This, of course, is the same Andrew Jackson who felt the federal government had too much power, and whose reelection campaign in 1832 was based on his positions against federal involvement in banking (the charter veto) and internal improvements. Ellis tells the history of the Nullification crisis.

37.The numbers are taken from Gates, p. 86. Other additional to the public domain included the cession of Florida and the Gadsen purchase.

38.Fenstermaker provides detailed information on the chartering of state banks before 1837.

39.The relationship between ownership and taxation of banks to the number of banks charted in Pennsylvania, Massachusetts, and other states is examined in Wallis, Sylla, and Legler.

40.See Bodenhorn, 2000, p. 63.

41.The numbers for Mississippi and Michigan are larger because of the creation of banks in 1835 and 1836.

42.The 148% figure in Illinois is the result of a large state investment in 1837, which occurred after the figure on bank capital was collected in January. The same is true for Alabama.

43.The classic history of government involvement in transportation remains Goodrich [1960], which has been supplemented by Larson, [200?].

44.Arkansas became a state in 1837 and the first act of the state legislature was to create a back capitalized by state bonds.

45.Information on state finances in the 1830s and 1840s is available at ICSPR Richard Sylla, John Legler, and John Wallis "Sources and Uses of Funds in State and Local Governments, 1790-1915: [United States]", Data set 1993-05-13.

46.How much was repaid and how quickly varied from state to state. Pennsylvania and Maryland resumed payments by 1848 and paid back interest in full. Indiana and Illinois were still struggling in the 1850s.

47.For a paper that estimates the effect of railroad construction on land values and property tax revenues in the late 19th century see Heckelman and Wallis, and for a direct measure of canal construction on land values in Indiana in the mid-1830s, see Wallis.

48.Of course, these states would spend again for transportation in the 20th century when the automobile was developed. While the state of Illinois stopped spending, local governments continued to borrow money to invest in railroads, and a number of cities and counties went bankrupt in the 1870s.

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Table 1
Government Revenues in Levels and Share of GNP

Decade Levels	Federal	State	Local	Total	Share of GNP
1800	1.96	0.42			
1810	1.80	0.36			
1820	2.52	0.56			
1830	2.07	0.54			
1840	1.50	0.88	1.23	3.60	4.0%
1850	1.93	0.99	1.23	4.14	4.2%
1860	3.32	1.72	2.17	7.20	5.4%
1870	9.82	2.34	5.48	17.64	8.4%
1880	6.39	1.70	4.98	13.07	5.7%
1890	5.74	1.84	5.96	13.55	6.4%
1900	6.42	2.43	8.83	17.68	7.2%

Share of GNP	Federal	State	Local	Total
1902	3.0%	0.8%	4.0%	7.8%
1913	2.4%	0.9%	4.2%	7.5%
1922	5.8%	1.7%	5.2%	12.6%
1927	4.7%	2.1%	6.0%	12.8%
1934	6.0%	3.8%	7.6%	17.4%
1940	7.0%	5.0%	5.8%	17.9%
1946	22.3%	3.7%	3.6%	29.5%
1952	20.4%	4.1%	4.0%	28.5%
1957	19.3%	4.6%	4.7%	28.6%
1962	18.5%	5.2%	5.5%	29.2%
1967	19.7%	5.7%	5.4%	30.8%
1972	18.4%	6.9%	6.2%	31.5%
1977	19.2%	7.6%	6.0%	32.8%
1982	21.6%	8.2%	6.2%	36.1%
1987	21.0%	9.1%	6.9%	37.0%
1992	20.8%	9.3%	7.3%	37.5%

Sources:
National revenues from Historical Statistics
State revenues from Wallis, Sylla, and Legler
Local revenues from Legler, Sylla, and Wallis
Gnp from Gallman, vol 30: 1839 1849 1859;
Balke and Gordon remaining years
Population from Historical Statistics
Post 1902 from Historical Statistics of Government Finaance.

Table 2
Annual Averages
Per Capita Revenues

		Per Capita Revenues			Property Tax Share		
		1808 to 1812	1813 to 1817	1818 to 1824	1808 to 1812	1813 to 1817	1818 to 1824
	CT	0.32	0.61	0.29	0.56	0.66	0.59
	DE	0.38	0.40	0.27	0.48	0.45	0.10
	MD	0.11	0.41	0.39	0.00	0.00	0.02
	NH	0.10	0.23	0.21	0.00	0.00	0.43
	NY	0.44	0.93	0.98	0.03	0.20	0.23
	OH	0.17	0.37	0.22	1.00	0.87	0.84
	PA	0.47	0.59	0.43	0.00	0.00	0.00
	RI	0.13	0.33	0.20	0.51	0.43	0.50
	SC	0.72	1.04	1.02	0.34	0.62	0.49
	VA	0.42	1.00	1.05			
	VT	0.19	0.22	0.18	0.52	0.55	0.73
Simple Average		0.31	0.56	0.48	0.34	0.38	0.39
Population Weighted Average		0.38	0.72	0.67	0.16	0.24	0.26
Population Weighted Average w/o Ohio & Delaware		0.28	0.68	0.64	0.10	0.17	0.18

Table 3
Property Tax Revenues

	Per Capita Property Tax Revenues 1835 to 1841	1842 to 1851	Property Tax Share of Total Revenue 1835 to 1841	1842 to 1851	Per Captia Revenues Net of Loans 1835 to 1841	1842 to 1851
MA	0.01	0.04	0.01	0.04	1.04	1.08
MD	0.03	0.87	0.02	0.50	1.62	1.73
NY	0.01	0.14	0.00	0.08	1.45	1.72
PA	0.02	0.53	0.02	0.37	1.58	1.43
RI	0.00	0.05	0.00	0.10	0.56	0.47
DE	0.01	0.00	0.03	0.00	0.39	0.43
SC	0.00	0.00	0.01	0.00	0.50	0.56
NC	0.03	-	0.19		0.18	-
weighted average	0.01	0.25	0.02	0.16	1.21	1.28
CT	0.14	0.13	0.47	0.50	0.29	0.27
NH	0.19	0.20	0.94	0.80	0.21	0.25
VT	0.21	0.23	0.34	0.77	0.60	0.30
weighted average	0.18	0.18	0.58	0.68	0.37	0.27
IL	0.14	0.22	0.26	0.82	0.54	0.26
IN	0.23	0.34	0.84	0.28	0.28	1.23
OH	0.21	0.52	0.27	0.46	0.80	1.11
AK	0.33	0.18	0.88	0.29	0.37	0.65
MS	0.29	0.62	0.54	0.46	0.53	1.35
KY	0.25	0.27	0.40	0.63		
MI	0.80	1.21	0.28	0.56	2.88	2.15
weighted average	0.25	0.45	0.43	0.51	0.59	0.90
National weighted average	0.11	0.32	0.20	0.33	0.94	1.07

Table 4
Price Differentials Cincinnati and New York
Bushel of Flour

	1816-1820	1856-1860
Price in East	$8	$5
Difference in Price	$2.48	$0.28
Price in West	$5.52	$4.72
Interest Rate	24%	8%
Interest Paid	$0.33	$0.09
Interest as Percentage of Price Differential	13%	34%
Interest as Percentage of Price in West	6.0%	2.0%

Price Differential Over time	1816-1820	$2.48
	1821-1825	$2.81
	1826-1830	$1.78
	1831-1835	$1.43
	1836-1840	$1.02
	1841-1845	$1.37
	1846-1850	$1.68
	1851-1855	$1.36
	1856-1860	$0.28

Table 5
Federal Transportation Expenditures
1800 to 1860

By Function	Level	Share	Itemized	Not Itemized
Unspecified Navigation	$14,240	0.26		$14,240
Roads	$9,821	0.18	$9,821	
Harbors	$8,256	0.15	$7,737	$519
Coastal Navigation	$7,428	0.14	$5,511	$1,917
Rivers	$5,845	0.11	$5,327	$518
Public Land Funds	$4,745	0.09	$4,745	
Canals	$1,917	0.03	$1,917	
Internal Navigation	$1,695	0.03	$1,692	$3
Other	$940	0.02		$940
Total	$54,888	1.00	$36,750	$18,137
Itemized Total	$36,750	0.67		
NonItemized Total	$18,138	0.33		
By Decade				
1800-1809	$193	0.01		
1810-1819	$1,931	0.05		
1820-1829	$4,465	0.12		
1830-1839	$16,365	0.45		
1840-1849	$3,178	0.09		
1850-1859	$9,790	0.27		
1800-1860	$36,750	1.00		
By Region				
New England	$3,185	0.09		
Mid-Atlantic	$4,260	0.12		
East-North Central	$10,006	0.27		
West-North Central	$2,414	0.07		
South Atlantic	$9,340	0.25		
East-South Central	$3,081	0.08		
West-South Central	$3,152	0.09		
Mountain	$663	0.02		
Pacific	$648	0.02		
Total	$36,750	1.00		

Source: Malone, 1998, Tables 2.1, 2.2, 3.1, and 3.3.
Note: Non-Itemized Rivers and Harbors were reported as $1,037,521; I have divided them equally between "Rivers" and "Harbors."

Table 6
Banks and Bank Capital and
State Investments in Banks in 1837

State	Banks (1)	Capital (2)	Capital per Bank (3)	Bank Debt (4)	State Investment Share of Capital (5)	Bank Debt Share All Debt (6)
ME	55	5,226,700	95,031	---	---	---
NH	27	2,839,508	105,167	---	---	---
VT	6	510,000	85,000	---	---	---
MA	123	37,074,690	301,420	---	---	---
RI	62	9,837,171	158,664	---	---	---
CT	31	8,744,697	282,087	---	---	---
NY	98	37,101,460	378,586	---	---	---
NJ	25	4,142,031	165,681	---	---	---
PA	49	23,750,338	484,701	---	---	---
DE	4	818,020	204,505	---	---	---
MD	21	10,438,655	497,079	---	---	---
DC	7	2,204,415	314,916	---	---	---
VA	5	6,731,200	1,346,240	---	---	---
NC	3	2,525,000	841,667	---	---	---
SC	10	8,636,118	863,612	---	---	---
GA	16	11,438,828	714,927	---	---	---
FL	4	2,046,710	511,678	1,500,000	73%	100%
AL	3	7,572,176	2,524,059	7,800,000	103%	72%
LA	16	36,769,455	2,298,091	22,950,000	62%	97%
MS	9	12,872,815	1,430,313	7,000,000	54%	100%
TN	3	5,092,665	1,697,555	3,000,000	59%	42%
KY	4	7,145,326	1,786,332	2,000,000	28%	27%
MO	1	250,000	250,000	2,500,000	100%	100%
IL	2	2,014,760	1,007,380	3,000,000	149%	26%
IN	1	1,585,481	1,585,481	1,390,000	88%	12%
OH	32	9,247,296	288,978	---	---	---
MI	9	1,400,000	155,556	---	---	---
TOTAL	627	293,015,515	467,329			

Regional Shares	Banks	Capital	Capital Per Bank
New England	48%	22%	211,292
Mid Atlantic	33%	27%	384,583
South Atlantic	6%	11%	825,733
South West	5%	21%	2,009,907
North West	8%	7%	441,691

Table 7
Total State debt and debt per capita in 1841,
and whether a State defaulted.

State	Total Debt 1841	Debt PC 1841	Default?
FL	$4,000,000	$74.07	Y
LA	$23,985,000	$68.14	Y
MD	$15,214,761	$32.37	Y
IL	$13,527,292	$28.42	Y
AK	$2,676,000	$27.31	Y
MI	$5,611,000	$26.47	Y
AL	$15,400,000	$26.06	N
PA	$33,301,013	$19.32	Y
MS	$7,000,000	$18.62	Y
IN	$12,751,000	$18.59	Y
NY	$21,797,267	$8.97	N
MA	$5,424,137	$7.35	N
OH	$10,924,123	$7.19	N
WI	$200,000	$6.45	N
SC	$3,691,234	$6.21	N
TN	$3,398,000	$4.10	N
KY	$3,085,500	$3.96	N
ME	$1,734,861	$3.46	N
VA	$4,037,200	$3.23	N
MO	$842,261	$2.19	N
GA	$1,309,750	$1.90	N
NH	$0	$0.00	N
CT	$0	$0.00	N
VT	$0	$0.00	N
RI	$0	$0.00	N
NC	$0	$0.00	N
NJ	$0	$0.00	N
DE	$0	$0.00	N

Notes: Debt in 1841 and 1880 taken from 1880 Census.

Figure 1

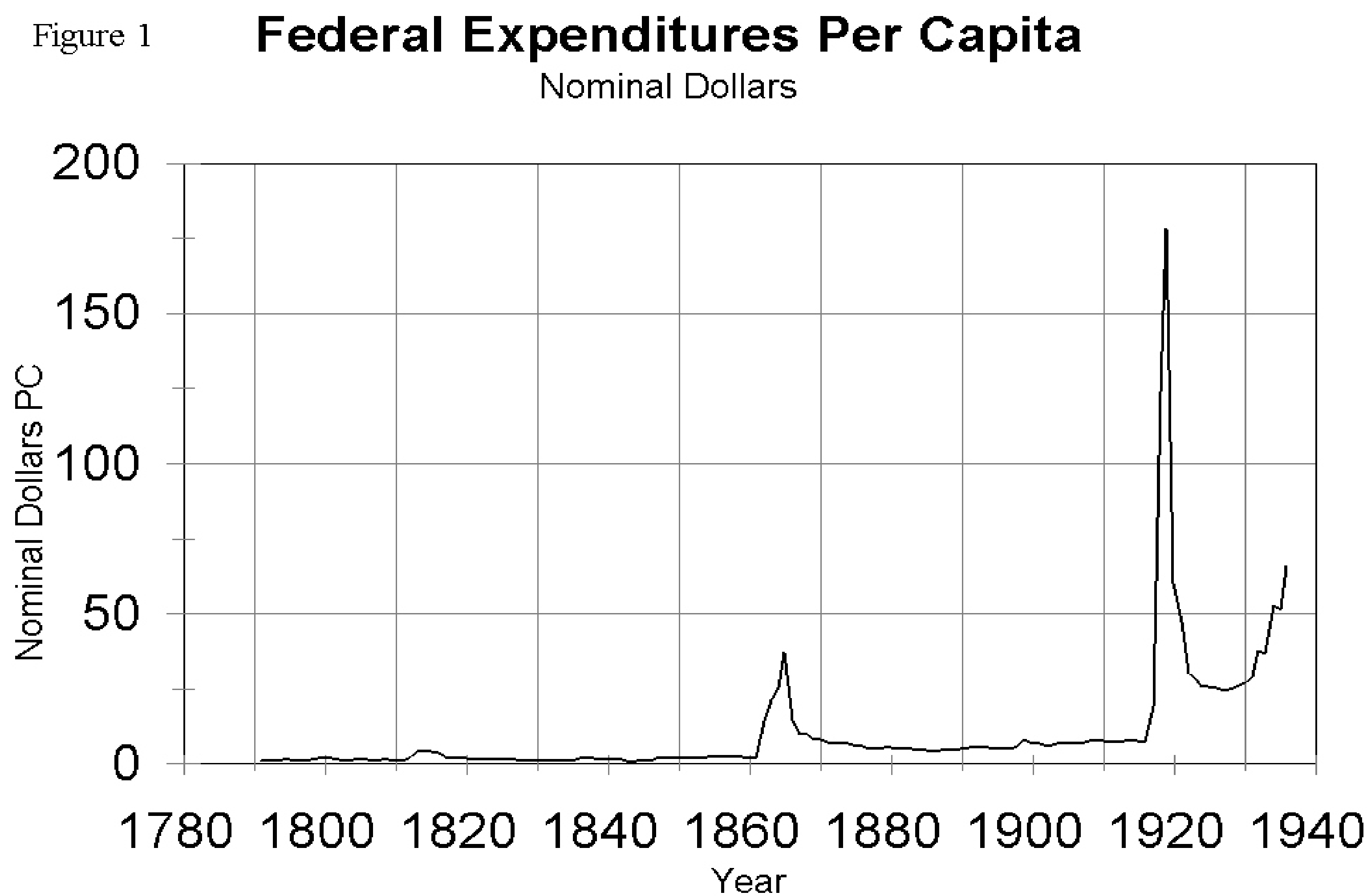
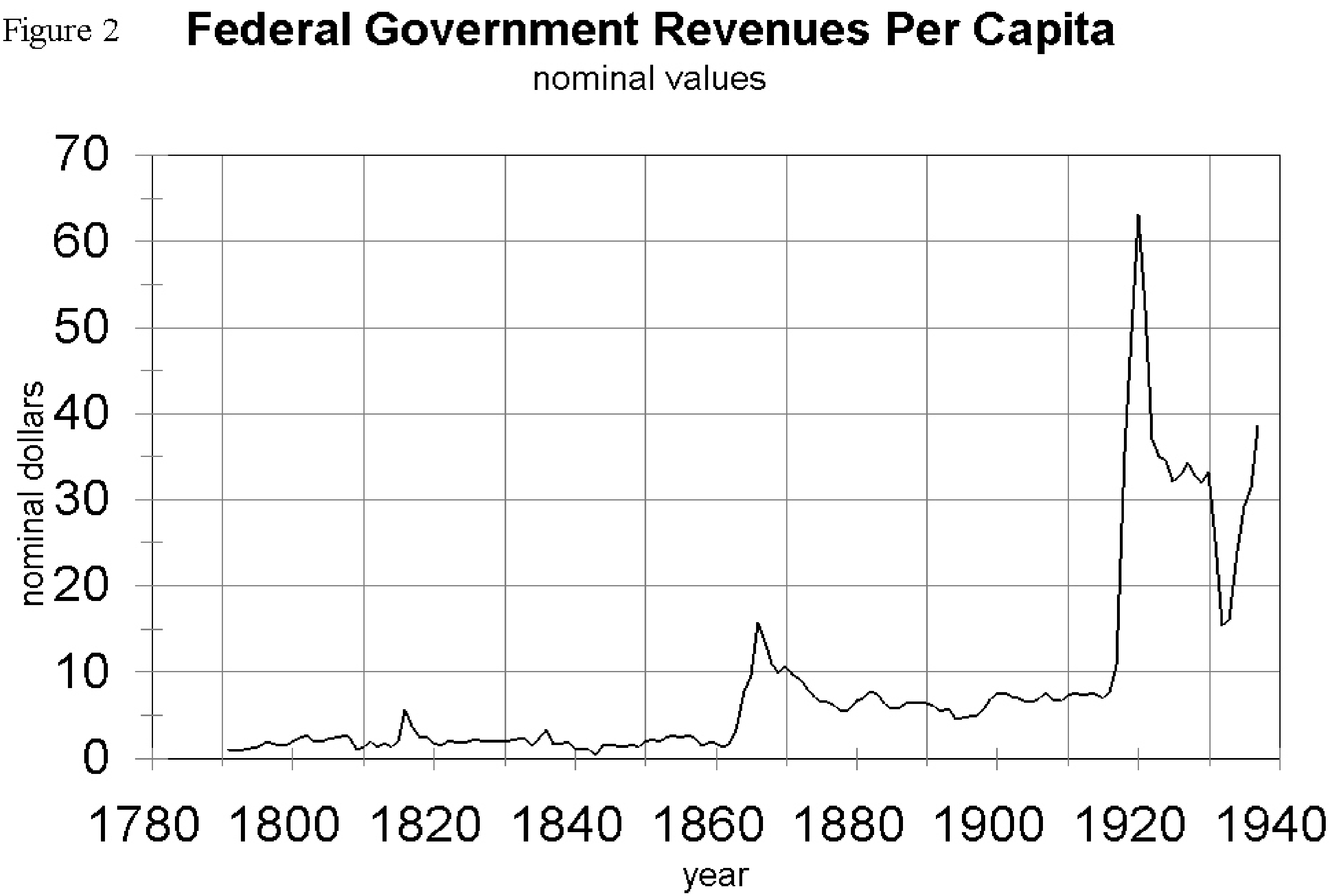

Federal Expenditures Per Capita
Nominal Dollars
200
150
100
50
0
Nominal Dollars PC
1780 1800 1820 1840 1860 1880 1900 1920 1940
Year

Figure 2


Federal Government Revenues Per Capita
nominal values
70
60
50
40
30
20
10
0
nominal dollars
1780
1800
1820
1840
1860
1880
1900
1920
1940
year

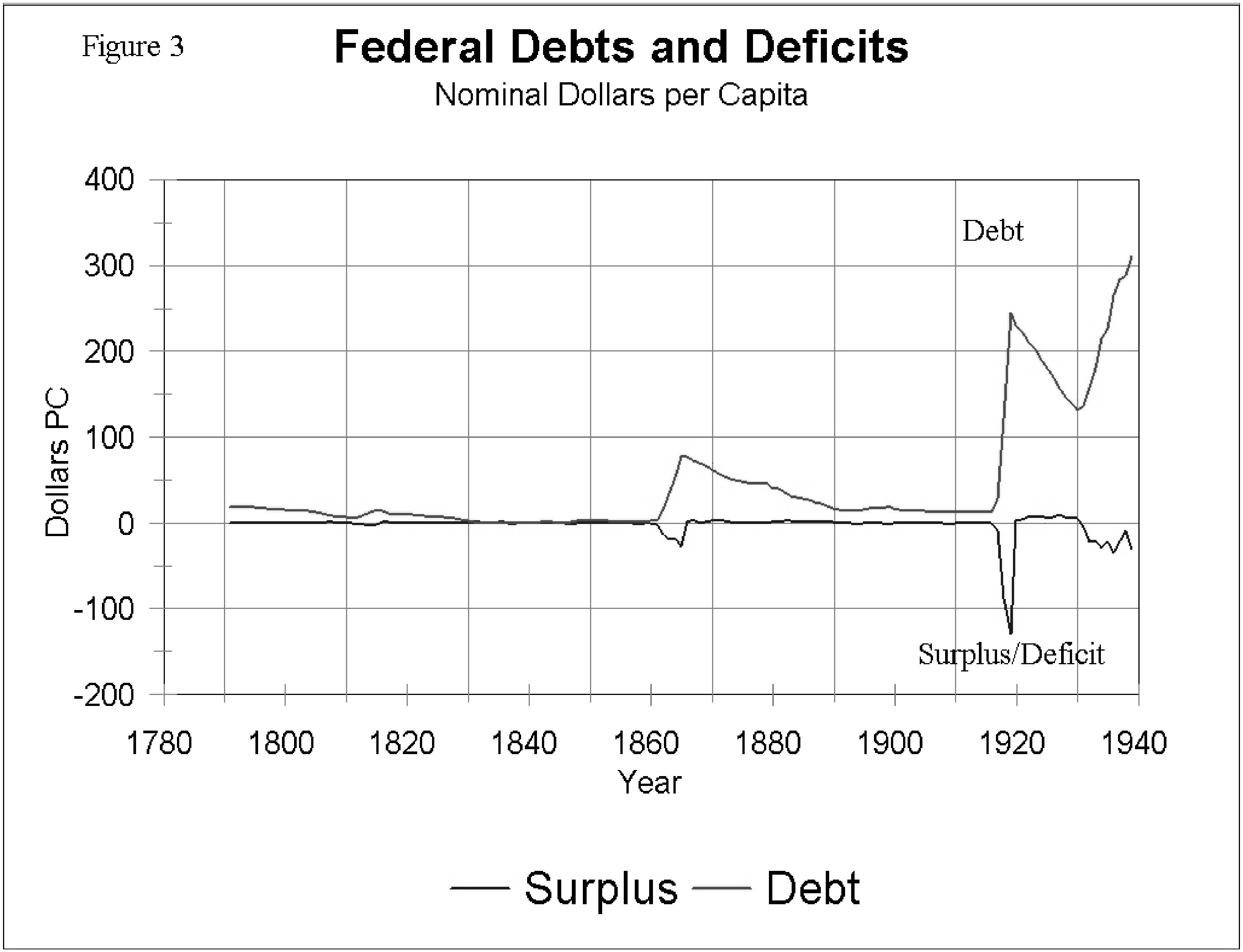


Figure 3
Federal Debts and Deficits
Nominal Dollars per Capita
400
300
200
100
0
-100
-200
Dollars PC
Debt
Surplus/Deficit
1780
1800
1820
1840
1860
1880
1900
1920
1940
Year
Surplus
Debt

Figure 4

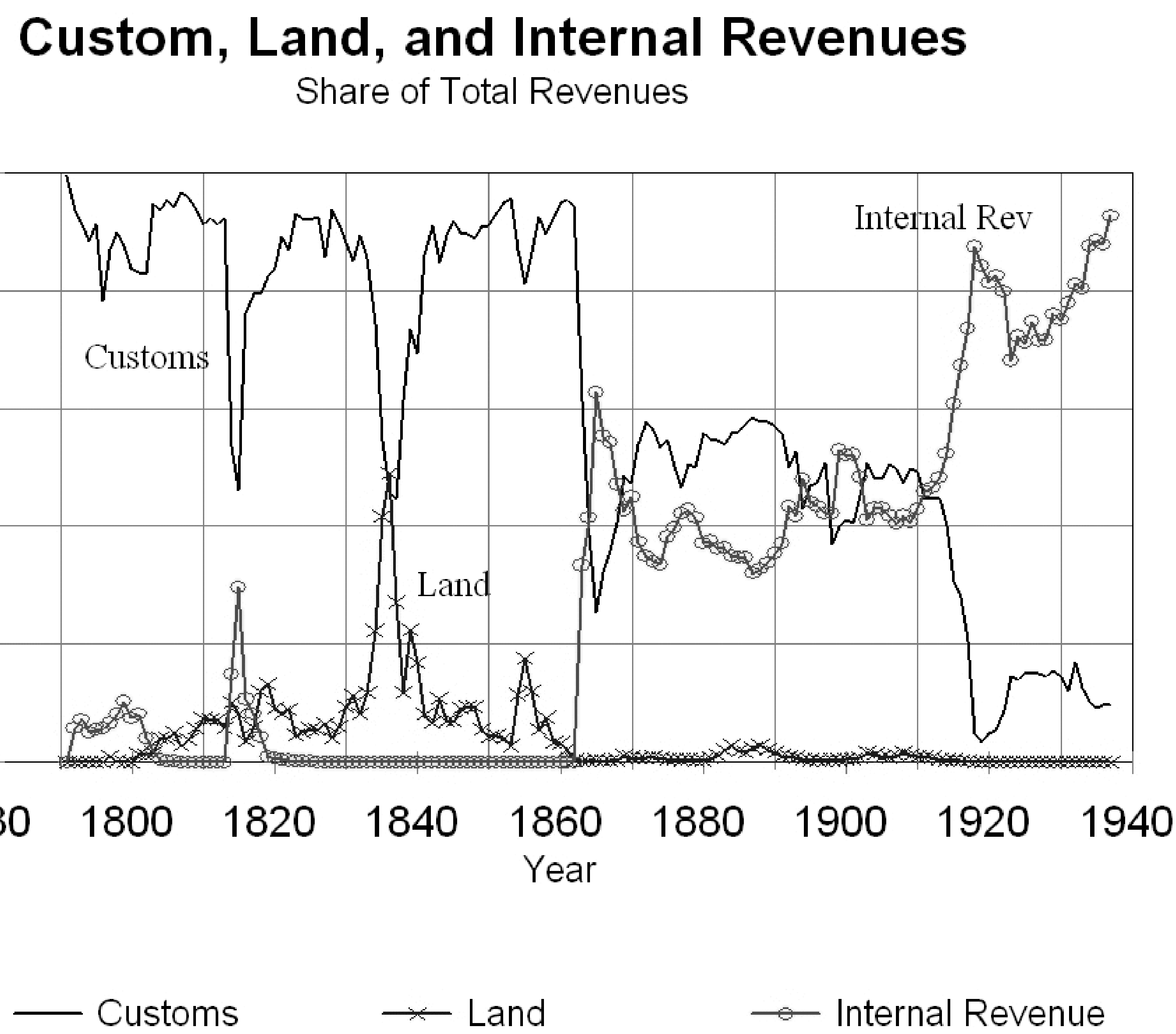
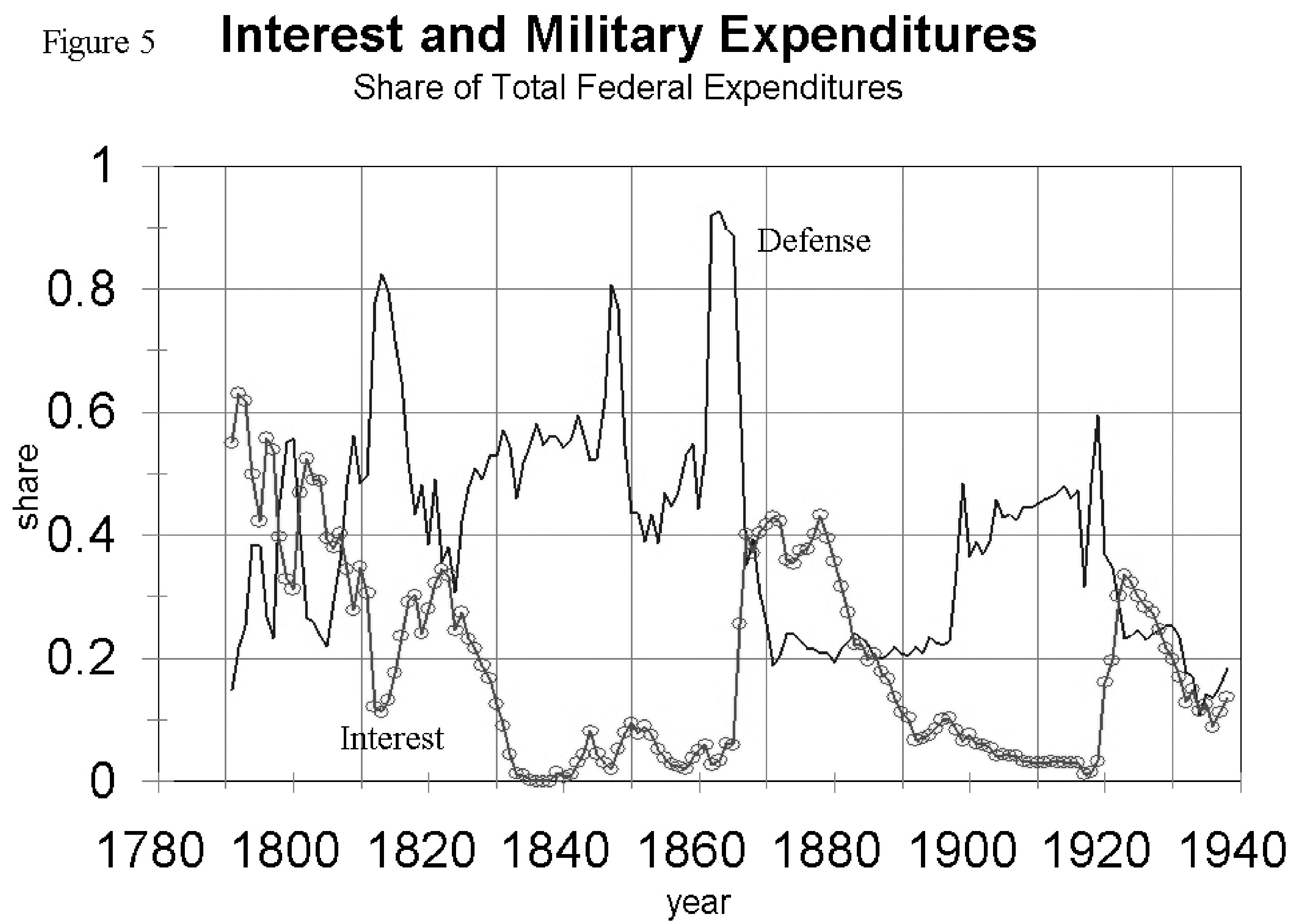

Custom, Land, and Internal Revenues
Share of Total Revenues
Share
Year
Customs
Land
Internal Rev
Internal Revenue
1
0.8
0.6
0.4
0.2
0
1780
1800
1820
1840
1860
1880
1900
1920
1940

Figure 5


Interest and Military Expenditures
Share of Total Federal Expenditures
share
year
Defense
Interest
0
0.2
0.4
0.6
0.8
1
1780
1800
1820
1840
1860
1880
1900
1920
1940

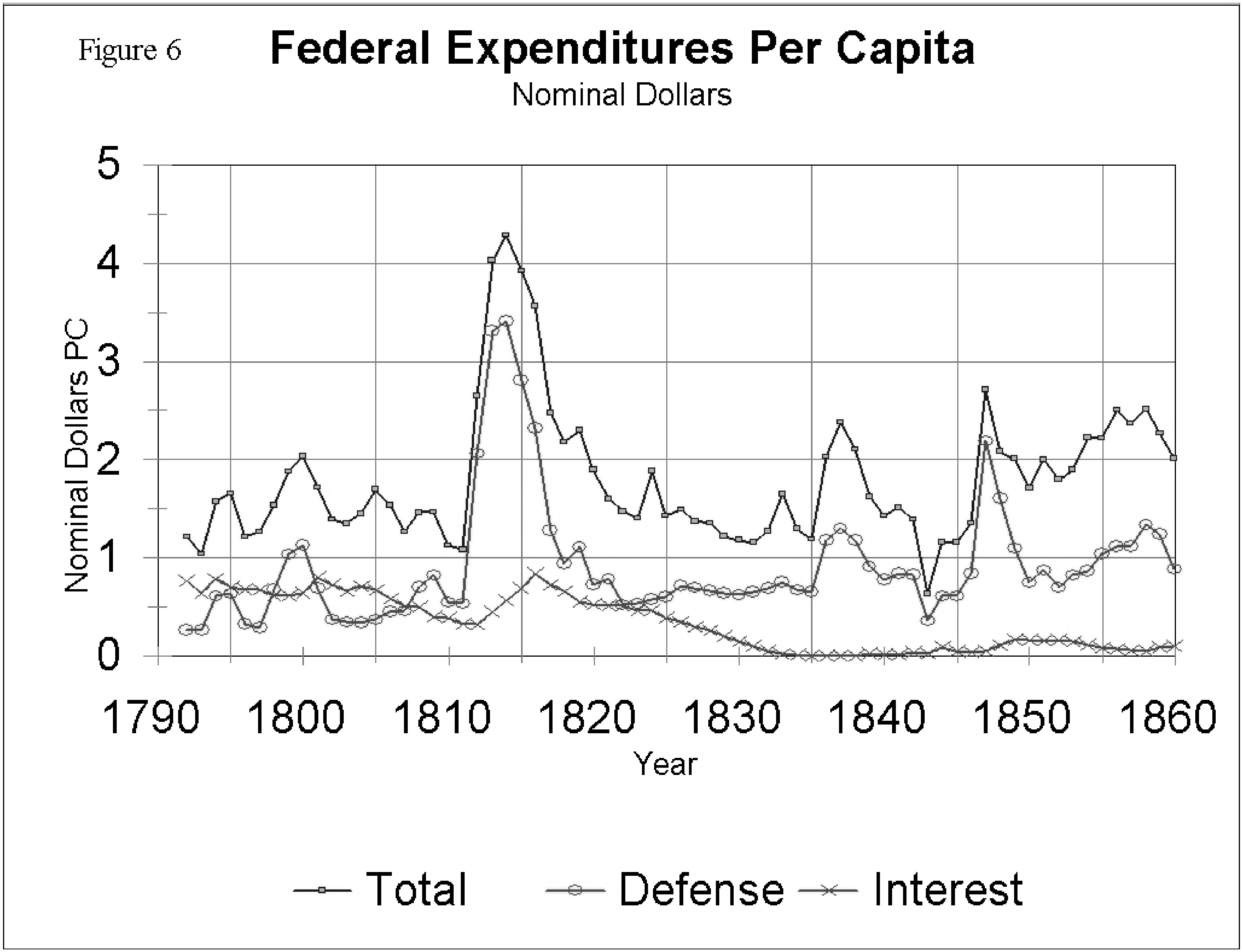


Figure 6
Federal Expenditures Per Capita
Nominal Dollars
5
4
3
2
1
0
Nominal Dollars PC
1790
1800
1810
1820
1830
1840
1850
1860
Year
Total
Defense
Interest

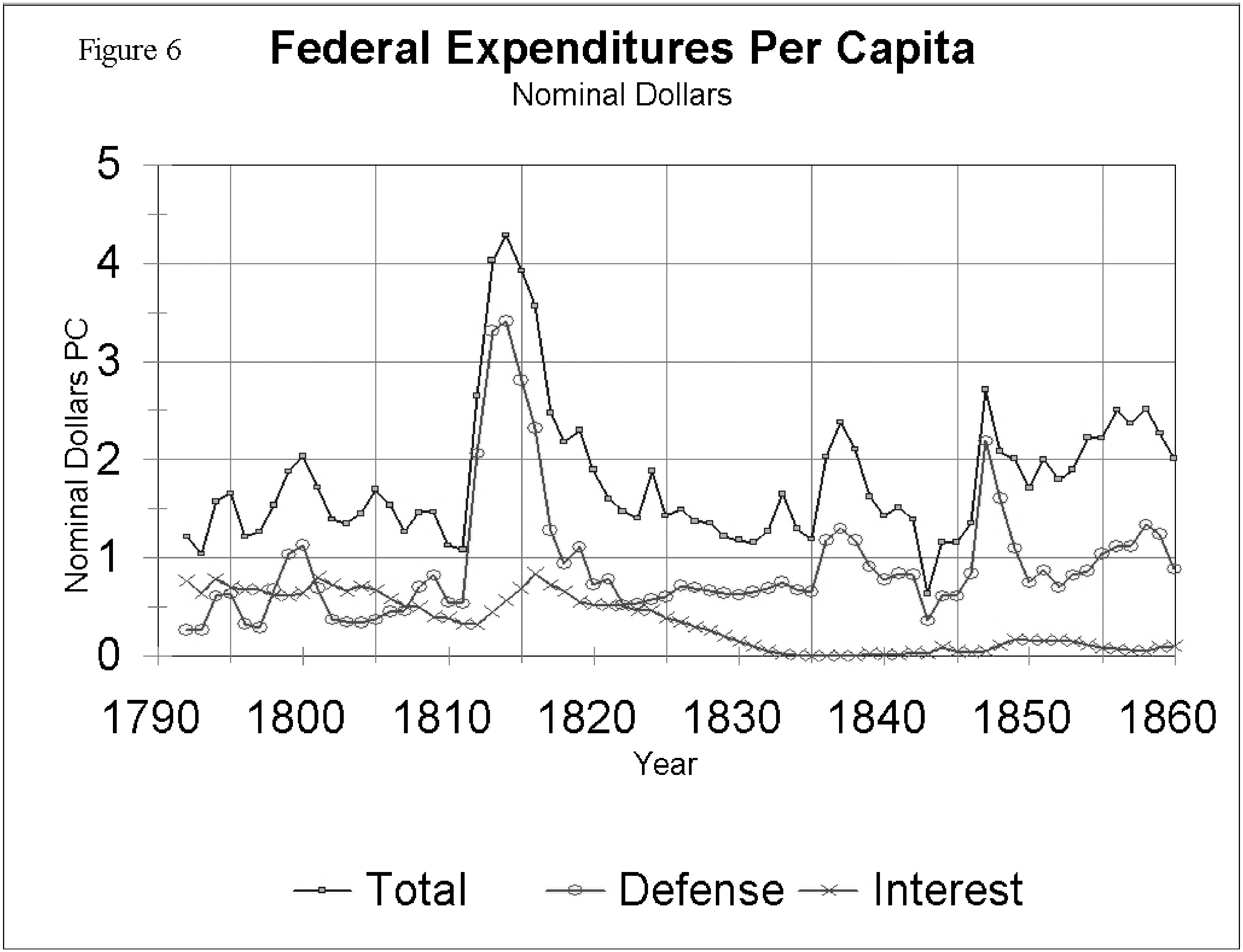


Figure 6
Federal Expenditures Per Capita
Nominal Dollars
Nominal Dollars PC
0
1
2
3
4
5
1790
1800
1810
1820
1830
1840
1850
1860
Year
Total
Defense
Interest

Figure 7

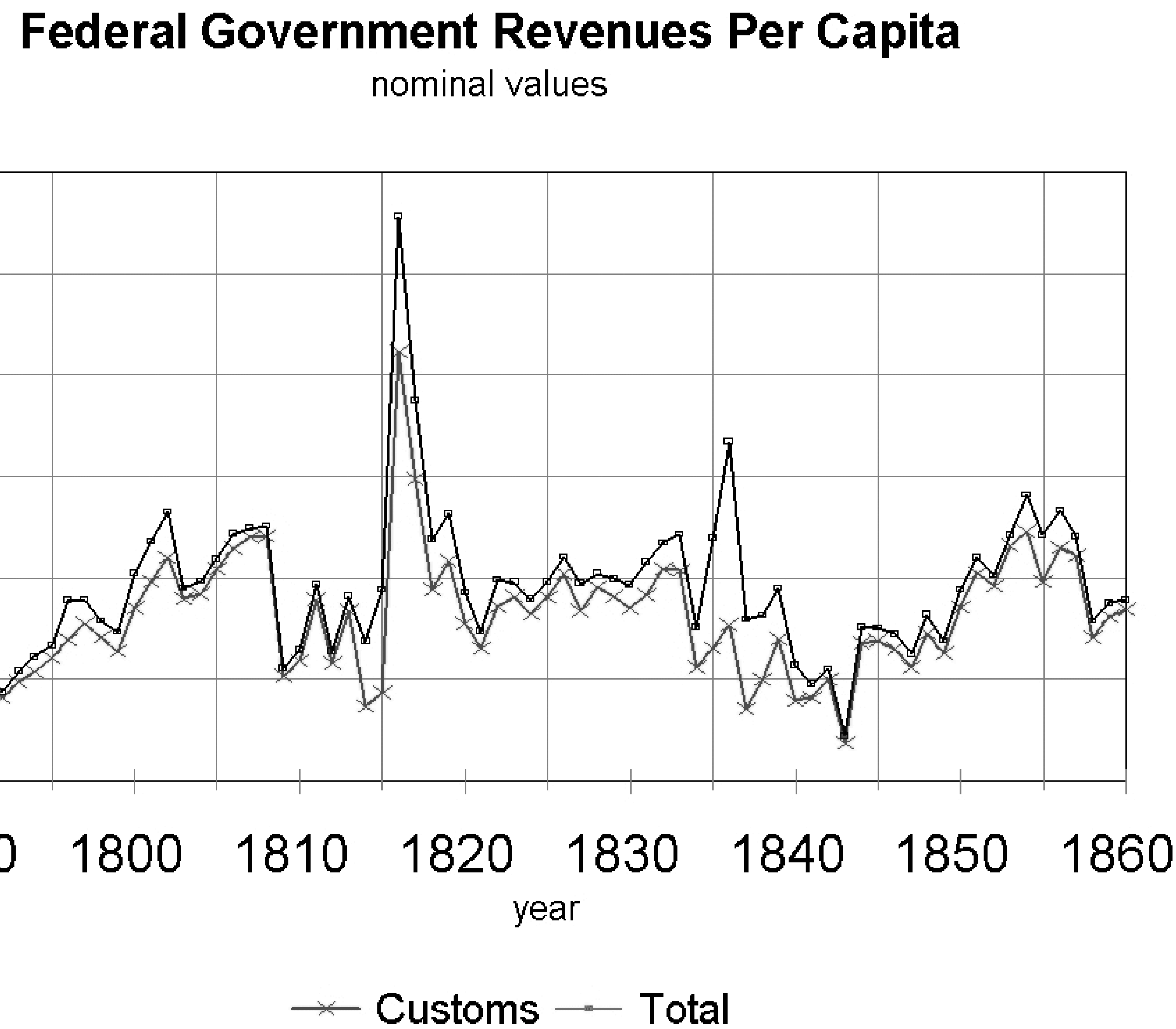

Federal Government Revenues Per Capita
nominal values
6
5
4
3
2
1
0
nominal dollars
1790
1800
1810
1820
1830
1840
1850
1860
year
Customs
Total

Figure 8

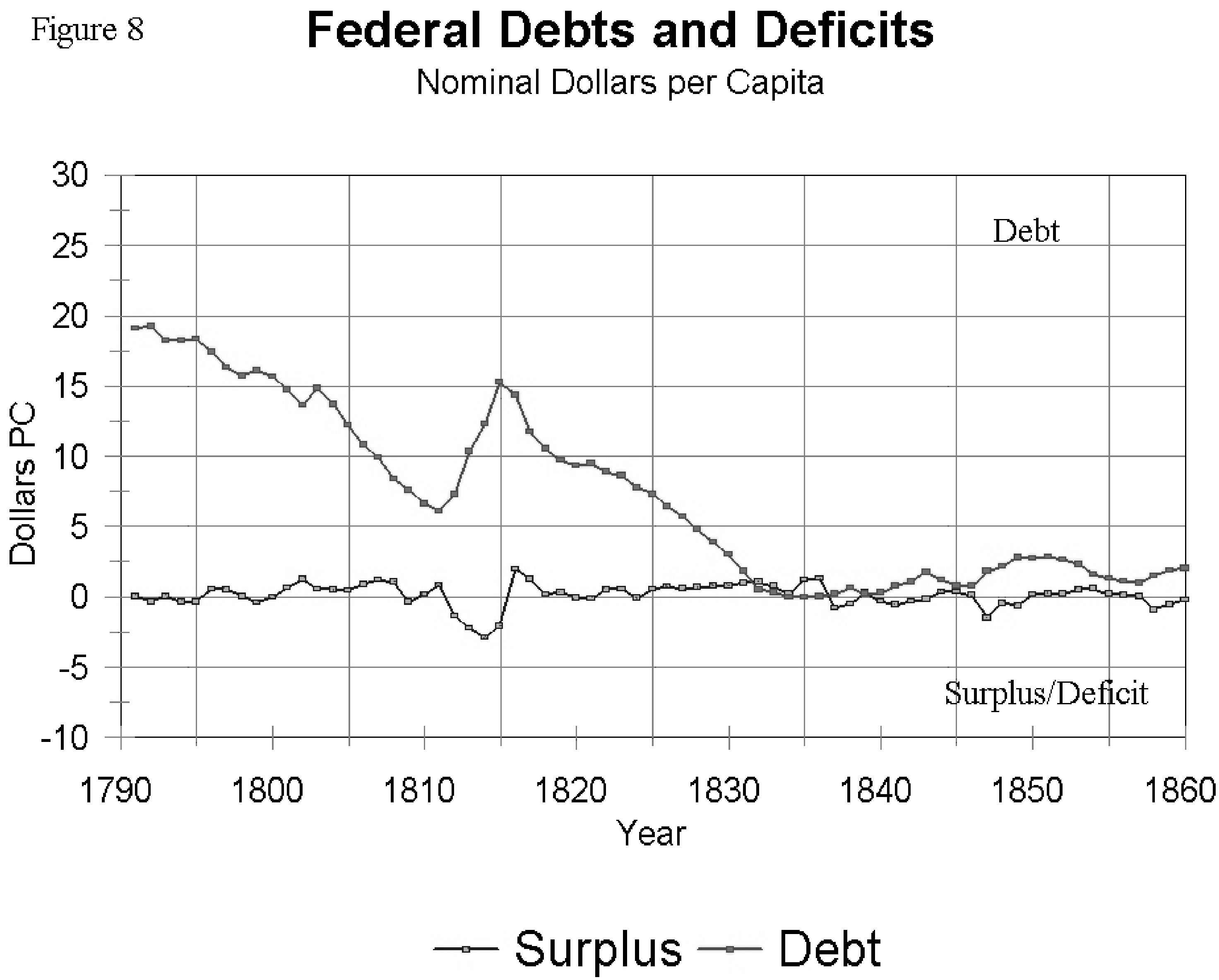
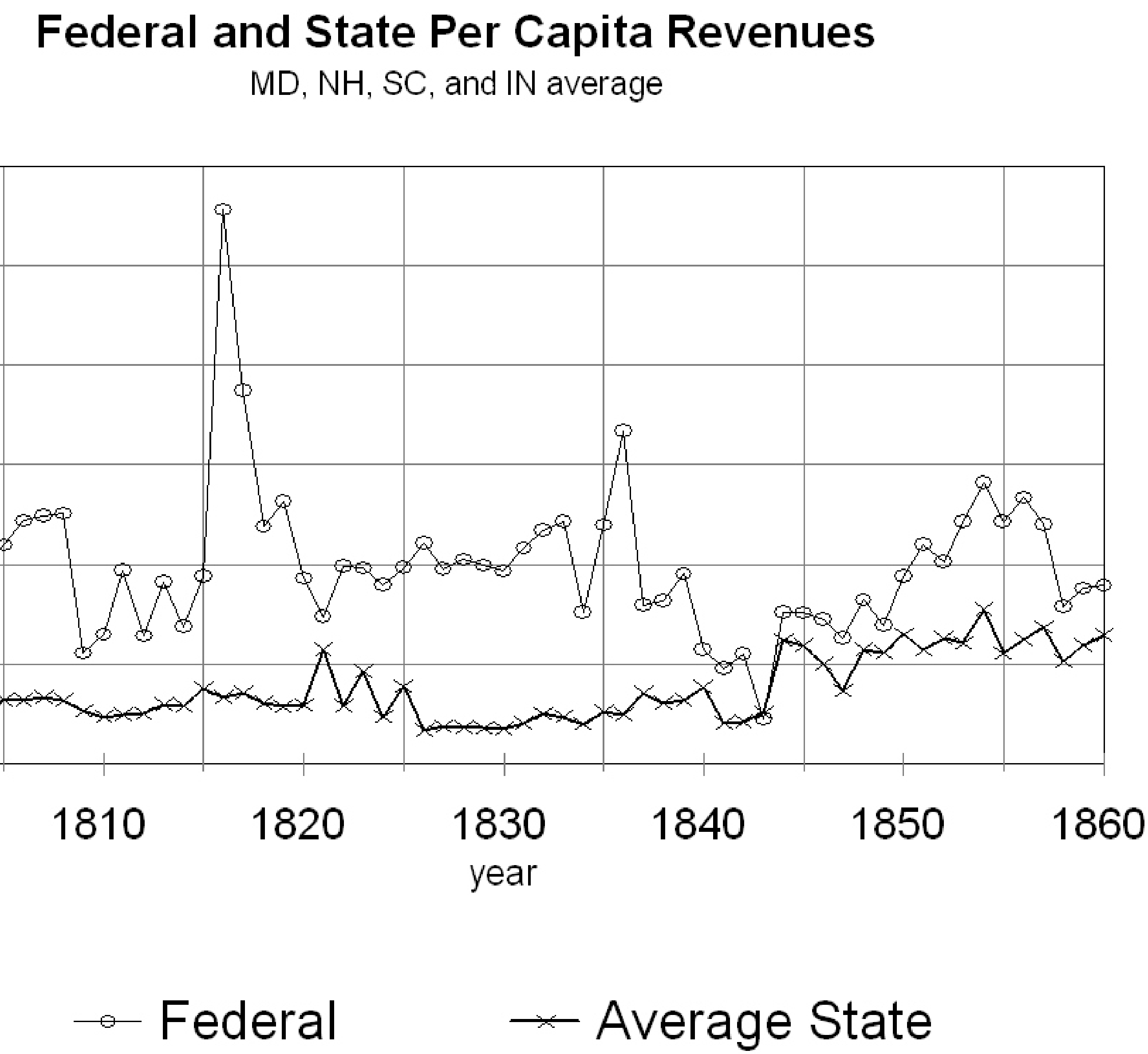

Federal Debts and Deficits
Nominal Dollars per Capita
30
25
20
15
10
5
0
-5
-10
Dollars PC
Debt
Surplus/Deficit
1790
1800
1810
1820
1830
1840
1850
1860
Year
Surplus
Debt

Figure 9


Federal and State Per Capita Revenues
MD, NH, SC, and IN average
nominal dollars per capita
0
1
2
3
4
5
6
1800
1810
1820
1830
1840
1850
1860
year
Federal
Average State

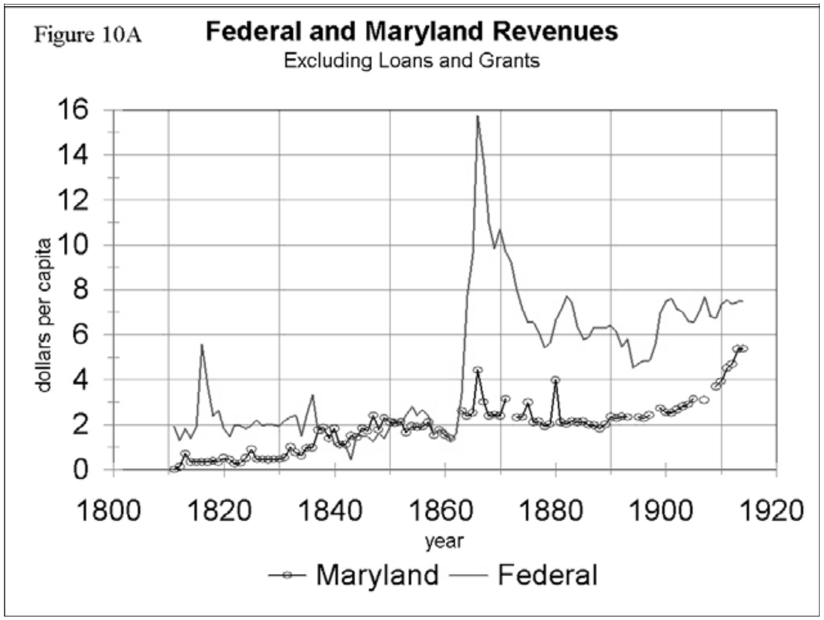


Figure 10A
Federal and Maryland Revenues
Excluding Loans and Grants
dollars per capita
16
14
12
10
8
6
4
2
0
1800
1820
1840
1860
1880
1900
1920
year
Maryland
Federal

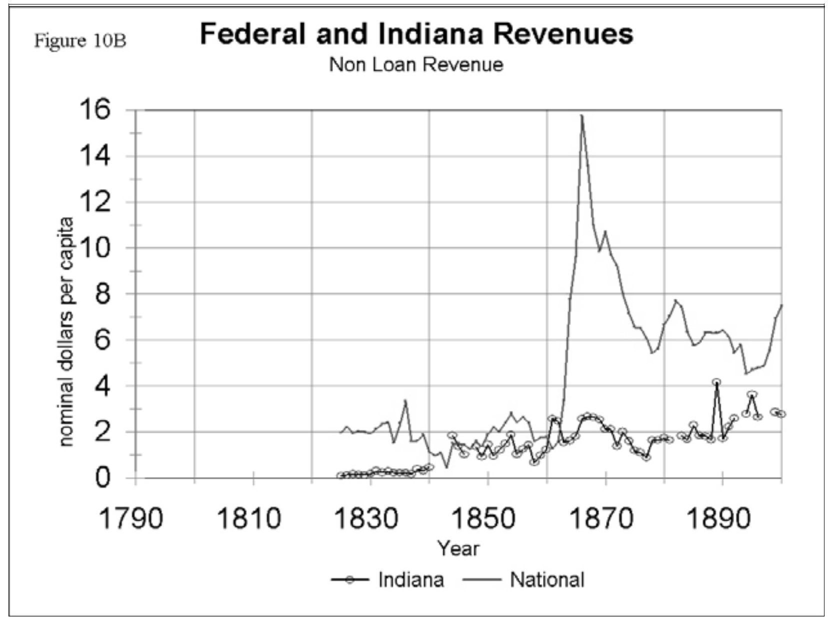


Figure 10B
Federal and Indiana Revenues
Non Loan Revenue
nominal dollars per capita
16
14
12
10
8
6
4
2
0
1790
1810
1830
1850
1870
1890
Year
Indiana
National

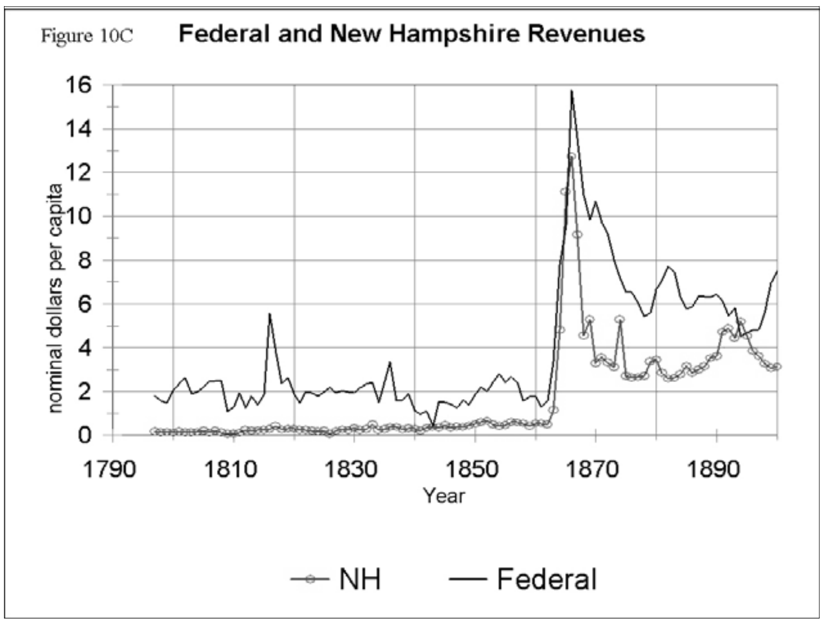


Figure 10C
Federal and New Hampshire Revenues
nominal dollars per capita
16
14
12
10
8
6
4
2
0
1790
1810
1830
1850
1870
1890
Year
NH
Federal

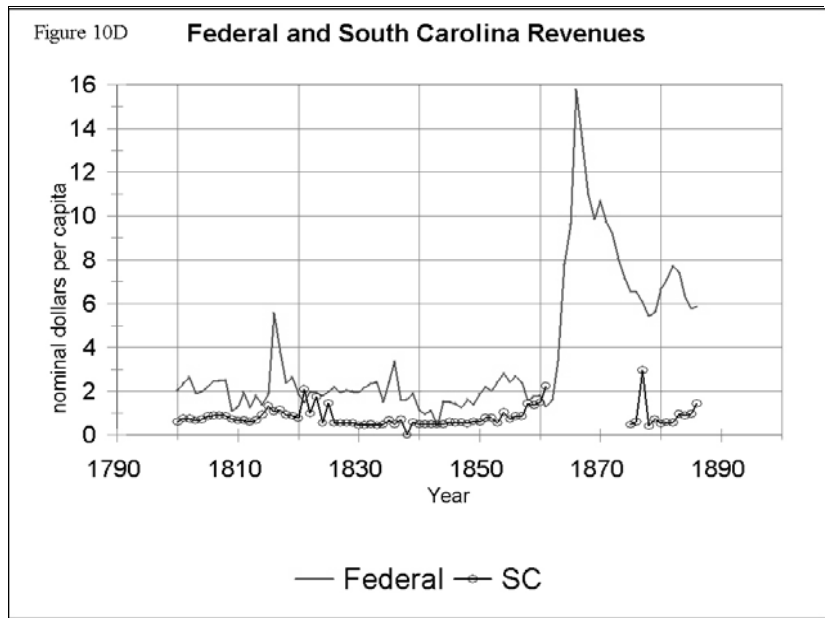


Figure 10D
Federal and South Carolina Revenues
nominal dollars per capita
16
14
12
10
8
6
4
2
0
1790
1810
1830
1850
1870
1890
Year
Federal
SC

Figure 11

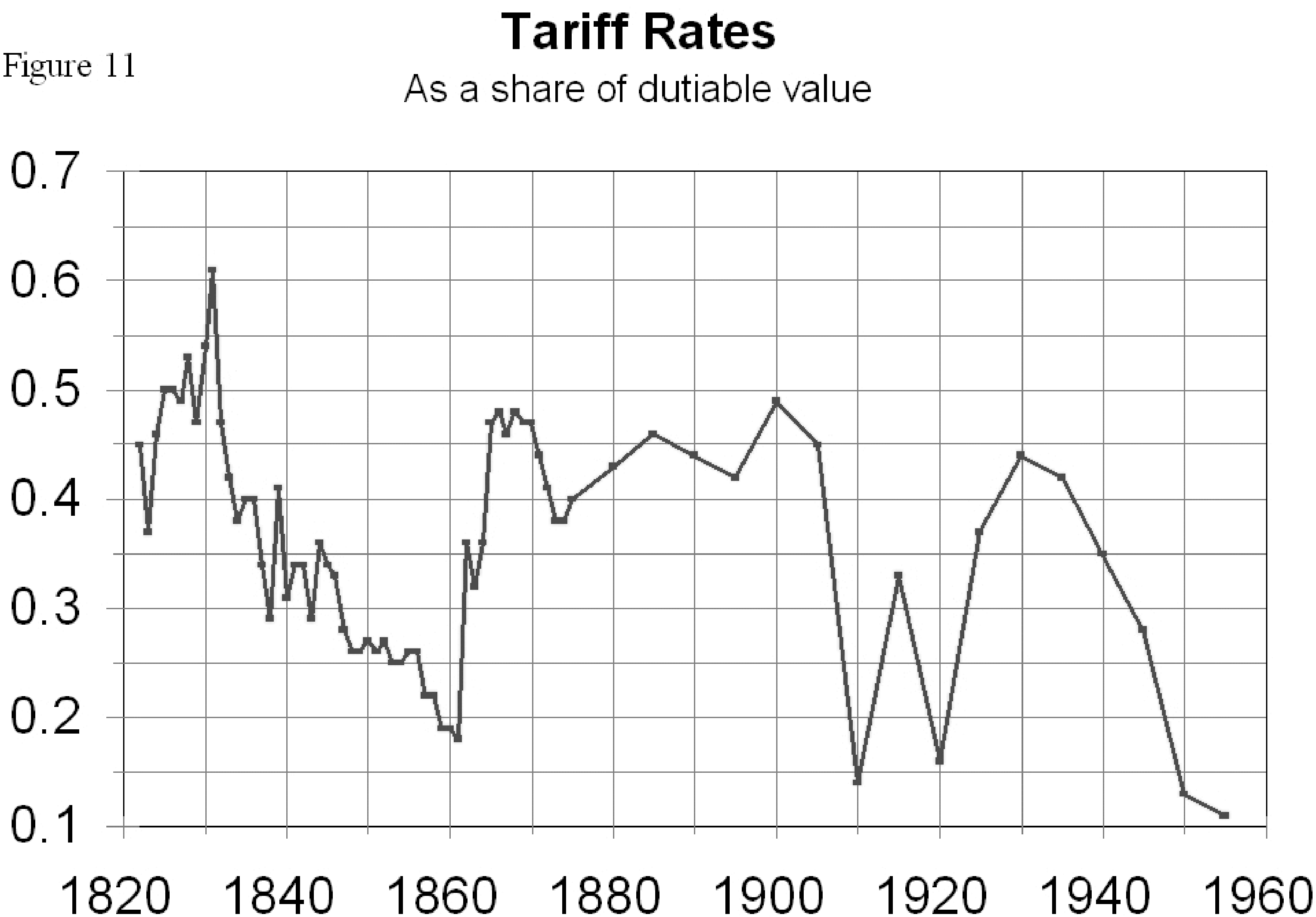
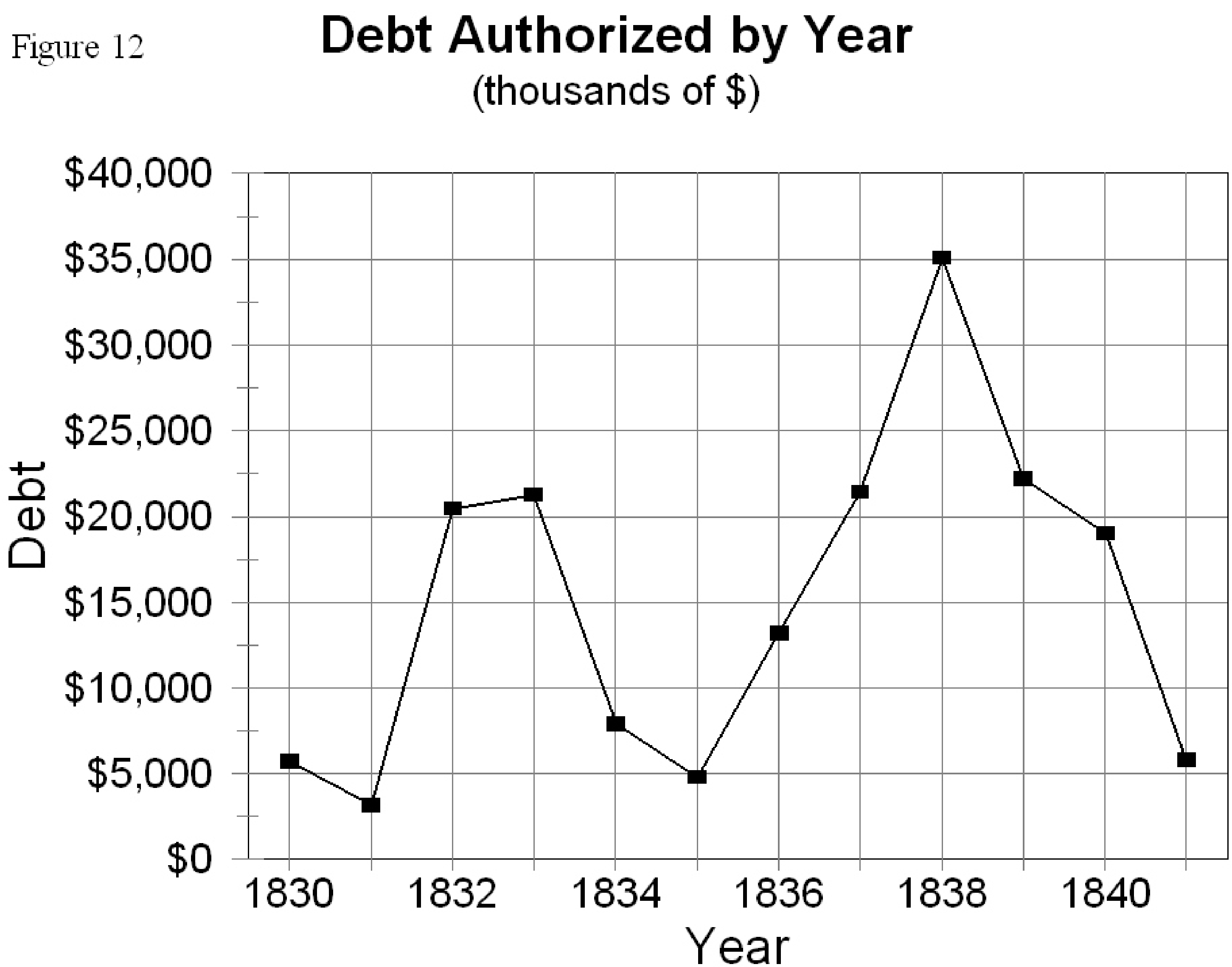

Tariff Rates
As a share of dutiable value
0.7
0.6
0.5
0.4
0.3
0.2
0.1
1820
1840
1860
1880
1900
1920
1940
1960

Figure 12


Debt Authorized by Year
(thousands of $)
$40,000
$35,000
$30,000
$25,000
$20,000
$15,000
$10,000
$5,000
$0
Debt
1830
1832
1834
1836
1838
1840
Year