## The Economics of the Revolution

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## Main ideas, I

- Economic forces play a central role in fostering the Revolution.
- Objective level: Economic growth in British North America triggers profound tensions between London and the colonies that lead to the Revolution.
- Subjective level: Economic growth in British North America makes separation thinkable because the scale and diversity of the economy offers the possibility of living outside the British Empire.

1. Colonists number a little more than 2.1 million people ( $\approx$ the population of the Dutch Republic) and have a higher GDP per capita than Britain.
2. However, the colonies are not as technologically sophisticated or militarily capable as Britain, and their financial sector is extremely limited.

## Main ideas, II

- The costs of the Revolution -both direct and indirect- are much higher than anticipated.
- The Revolutionary War lasts for over eight years (1775-1783), with around 150,000 deaths and 80,000 loyalists leaving the U.S. ( $\approx 3 \%$ of the population).
- High inflation and massive debt.
- Loss of international markets and fragmentation of internal markets.
- These costs accentuate the disenchantment with the Articles of Confederation, eventually leading to the Constitutional Convention and a much more powerful federal government than anyone had foreseen.
- It is likely that the U.S. would not have survived if Britain offered independence after the Battle of Saratoga.
- Also, with better financing, Benedict Arnold might have never become a traitor.


The economy on the eve of the Revolution

## Economic agents

- Economic growth leads to a self-conscious, powerful elite:

1. Merchants and financiers linked by networks of credit, business, and trade in the "port complex" of Boston-New York-Philadelphia.
2. Southern plantation owners.

- But also many other agents:
- Growing professional class.
- "Mechanics" at large costal towns.
- Independent farmers.
- Settlers in the western frontier.
- Not all of these agents agree on how to redefine the relationship with London.


## The ultimate cause

- Increasingly, the colonies lean toward a vision of an American empire under a republican government responsive to their interests:

1. Protect American commerce.
2. Encourage agriculture and industry.
3. Promote western settlement.

- Franklin, while spending 17 years in England before the Revolution, is arguably the first to think as an American:
- He sees the colonies as potentially the biggest and most dynamic part of the Empire.
- He has little hope that Parliament will be foresighted enough to see this and react accordingly.


## AMERICANIZATION

of

## BENJAMIN

 FRANKLINGORDONS.WOOD
WINNER of the PUIITZER PRIZE


## The proximate causes

- Colonial grievances are mainly economic:

1. British economic policy in the 1760 s and 1770 s inhibits economic growth and expansion into new activities and territories: Navigation Acts, Royal Proclamation of 1763.
2. Reduced expenditures in the colonies and fewer subsidies for migration.
3. Britain limits colonial attempts to counter a credit crisis by prohibiting the printing of colonial money.
4. Taxation.

- However, the consensus among historians is that these economic concerns, per se, were not large (or could have been negotiated away).


## Irreconcilable differences

- Disagreement centers not on this or that particular regulation or tax but on "who would determine the shape of things to come, on who would determine the future of the British Empire in America" (McCusker and Menard, 1985).
- Several forces amplified colonial fear of British rule and its economic implications.
- The opinions surrounding these issues fundamentally differ between Britain and the colonies, with each thinking that their policies and responses to them were eminently justified.
- Eventually, these constitutional differences would prove irreconcilable.
- The major ground-shaking change is direct taxation of goods and services: the colonists view Parliamentary taxation as depriving them of their property and liberty.


## A case study: The Navigation

Acts

## The growing costs of empire

- On the eve of the Revolution, the colonies have established trading relationships with other countries, some direct while others indirectly relying on reexport from Britain.
- Colonies enjoy prosperity in agriculture, improved organizational skills, and the beginning of a manufacturing sector.
- As the scale of production increases, Britain's mercantilist policies become more costly. A lot of money is thought to be on the table.
- Revolutionary thinkers extrapolate that unencumbered by mercantilism, they would grow even faster.
- But were the navigation acts really that burdensome at the time?



## The cost of the Navigation Acts, I

- Irwin (2017) calculates that Navigation Acts cost around 2\% of GDP and being part of the empire brought significant economic benefits.
- It is true that specie flowed to Britain because of the Acts, but the flow was not large, contrary to what is portrayed in most history books.
- Offsetting benefits included the protection of the Royal Navy and the large British market. Adding up costs and benefits yields a very small net cost.
- If the Navigation Acts had been that costly, the growth seen in the 18 th century would have been impossible.


## The cost of the Navigation Acts, II

- There is, therefore, substantial evidence that the Acts themselves were not enough to tip the balance.
- Colonists, such as New England shippers, understood the value of belonging to a large trading area.
- The First Continental Congress approved the navigation system in its resolutions.
- Also, Benjamin Franklin offered to have the Acts reenacted by every colonial legislature and to guarantee them for 100 years if Britain abandoned efforts to tax the colonies directly.
- While it is significant that those most economically affected by the Navigation Acts are among the strongest proponents of separation, it is unlikely that the cost was large enough to justify their actions.

The British perspective

## The British perspective

- The British interpret the colonial protests as an attempt to weaken the Navigation Acts and to evade responsibility for paying their share of supporting the empire and funding military engagements.
- Parliamentary provisions go beyond taxation:
- Lowered the tax on French West Indies molasses from 6 to 3 pence per gallon but was strictly enforced. Also taxed sugar, certain wines, coffee, and a few other goods.
- Severely affected the rum industry (New England) and sharply reduced trade with the Azores, Canary Islands, and French West Indies.
- Reduced sources of revenue by which colonies could purchase necessary British manufactured goods.
- Recall also the political economy within Britain (Parliament vs. the Crown).
- British policy radicalizes first Boston merchants, e.g., John Hancock.



## The Townsend Acts of 1767, I

- A series of separate Acts (in order of approval):

1. Revenue Act: Taxes glass, lead, painters' colors, and paper. It also gives the right to issue "writs of assistance" allowing for searching private property for smuggled goods. Controversial because English law established the right to be secure in one's private property.
2. Commissioners of Customs Act: Establishes a customs board located in the colonies to increase tax revenue and reduce smuggling. Conflict over its application eventually leads to the occupation of Boston and the Boston Massacre.
3. New York Restraining Act: Forbids passing any new bills unless New York provides housing, food, and supplies to British Troops. It never applied as the colonial assembly acquiesced.
4. Indemnity Act: Lowers the taxes for the British East India Company when it reexports tea to the colonies, driving out the profits of largely smuggled tea from elsewhere.
5. Vice Admiralty Court Act (1768): Gives naval courts rather than colonial courts jurisdiction in matters involving customs duties and smuggling.

## The Townsend Acts of 1767, II

- Partial repeal of the Revenue Act in 1770 .
- But colonials keep questioning the right to tax and regulate trade and challenge the Declaratory Act, 1766, asserting Parliament's complete authority to make laws binding on the colonies "in all cases whatsoever."
- There became increasing momentum for the idea that colonial commerce should be the province of republican government lodged in the colonial legislatures.

The Revolutionary War

## The costs of the war

- The Revolutionary War is a risky undertaking: the war has a potential high return but a significant probability of losing.
- Furthermore, the economic consequences of the Revolution are felt immediately.
- Between 1774-1781, the economy declines by $15 \%$ or more.
- The contraction continues throughout the 1780 s, representing perhaps the largest economic decline in the U.S. history.


## Trade collapse

- First Continental Congress passes "The Association" on October 20, 1774: bans British imported goods starting December 1, 1774, and all exports to Britain starting September 10, 1775.
- Rest of trade collapses with the British occupation of major cities: Boston, Newport, New York, and Philadelphia.
- Furthermore, the Royal Navy denies the U.S. access to overseas markets and allows rapid deployment and resupply of British troops.
- Also, Britain confiscates 30,000 enslaved persons and levies stiff duties on tobacco, leading to $20 \%$ lower production in 1784 than in 1774.
- Some recovery when the British withdraws from Boston (1776) and Philadelphia (1778) and France and Spain enter the war.
- But tonnage through Philadelphia in 1780 is $1 / 3$ of its value in 1770 , and New York is occupied until 1783.




RICHARDBUELIR.

## Financing the Revolutionary War

- Congress has to improvise a fiscal and monetary policy.
- Legitimacy is not clear: Second Continental Congress is an ad hoc body, and the Articles of Confederation are not adopted until November 15, 1777, and not ratified until March 1, 1781, when Maryland finally approves them after Viriginia's western claims are settled.
- Despite these challenges, throughout the war, the Continental Congress spends $\$ 87$ million Spanish dollars, raises about $\$ 47$ million ( $\$ 40$ million from Continentals, or around $84 \%$ of total), and accumulates $\$ 41$ million in specie-denominated debt and interest in arrears.
- Most of the expenditure was to finance the war, but $\$ 10$ million was spent on establishing a post office, payments to the Native American population, and financing diplomatic ventures.


# The Articles of Confederation 

An interpretation of the social-constitutional history of the American Revolution 1774-1781

by Merrill Jensen



## The limits of the Continental Congress

- War goes on for so long because there are not enough resources to fight on multiple fronts. It becomes a conflict of attrition.
- Continental Congress has no taxing authority but must rely on the states contributing funds.
- Based on population? Land? Changes during the war.
- Free rider problem of the public good of independence:

1. All states benefit from winning the war, but if the other 12 states pay resources and my state withholds, I still benefit a lot.
2. Incentive to underpay my share (think about the provision of effort when production is a team effort and the incentive to shirk).
3. The problem is, however, symmetrical, and hence everyone underpays.

## Debt and some desperate measures

- Very little tax revenue is raised.
- Continental Congress is forced to borrow abroad and issue debt and large quantities of a bill of credit that we know as Continental dollars.
- Before we move on: the first thing that comes to mind when we talk about the Continental dollar (the expression "Not Worth a Continental") belongs to the same category as Washington's cherry tree, a fanciful anecdote created by later book writers to embellish their points.
- No reference in print to this expression before 1851.
- As a last resort, Congress authorized the army to confiscate property, and some states organized conventions to establish wage and price controls.


## table 6.3 Percentage distribution of congressional monies spent, 1775-79, estimated by source and measured in Continental dollars (face value)

| Source | 1775 | 1776 | 1777 | 1778 | 1779 | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Continental dollars emitted | 100.00\% | 99.03\% | 58.79\% | 74.69\% | 76.66\% | 76.68\% |
| Domestic loans | 0.00\% | 0.00\% | 33.20\% | 5.50\% | 16.62\% | 12.80\% |
| Foreign loans and gift aid | 0.00\% | 0.97\% | 8.01\% | 19.81\% | 6.72\% | 10.52\% |
| Total | \$6,000,000 | \$19,122,420 | \$22,113,250 | \$85,017,038 | \$128,564,501 | \$260,817,209 |
| Converted to Spanish dollars (specie value) | \$6,000,000 | \$19,122,420 | \$7,371,083 | \$17,003,408 | \$6,428,225 | \$55,925,136 |

table 6.4 Congressional troop costs in just soldier salaries: Expressed in Continental dollars (face value) per year, 1775-79

|  | I775* | 1776 | 1777 | 1778 | 1779 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Number of men in | 27,443 | 46,90I | 34,820 | 32,899 | 27,699 |
| Continental pay |  |  |  |  |  |
| Biased-low annualized expected troop pay | \$ I, 380,874 | \$8,106,346 | \$6,018,272 | \$5,686,247 | \$4,787,48I |
| As a percentage of | 23.01\% | 42.81 \% | 46.29\% | 8.95\% | 4.86\% |
| Continental dollars emitted that year |  |  |  |  |  |

TABLE 6.5 Yearly distribution of congressional spending by type of expense, 1775-80

| Type of expense | $\begin{aligned} & \text { June 1775- } \\ & \text { I776 } \end{aligned}$ | 1777 | 1778 | 1779 | 17800 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| I. Spending that was relatively "current" war-theater specific |  |  |  |  |  |
| Army recruiting, pay, and other contingencies | $46.71 \%$ | $36.45 \%$ | 22.00\% | 10.55\% | 23.30\% |
| Commissary | ${ }^{12.66}$ | 21.78 | ${ }^{31.36}$ | 35.52 | 40.32 |
| Department Ouartermaster | 3.82 | 11.86 | 26.59 | 37.94 | 16.88 |
| Department Clothing, Hospital, and Prisoner | 3.37 | 5.81 | 7.30 | 6.21 | 4.04 |
| Departments Special | ${ }^{\circ}$ | ${ }^{\circ}$ | 1. 39 | $\bigcirc$ | - |
| Expedition against Detroit Subtotal | 66.56\% | 75.90\% | 88.64\% | 90.22\% | 84.54\% |
| 2. Spending that was less "current" war-theater specific |  |  |  |  |  |
| Military | o | 0.09 | ${ }_{0} .87$ | 2.55 | 6.39 |
| Stores and <br> Barrackmaster <br> Departments |  |  |  |  |  |
| Indian Affairs and Post Office | 0.21 | 0.13 | 0.03 | ${ }^{0.06}$ | 0.37 |
| Contingent <br> expenses and civil list | 1.53 | 1.57 | 1.82 | 0. 39 | 2.38 |
| Marine Committee | 7.21 | 3.61 | 1.79 | 1.10 | 1.31 |
| Secret | 6.43 | 2.51 | $\bigcirc$ | $\bigcirc$ | - |
| Committee 6.43 |  |  |  |  |  |
| Commercial Committee | 0 | ${ }^{\circ}$ | 0. 54 | 0.56 | ${ }^{0.61}$ |
| Advances to the states | 18.07 | 15.22 | 6.30 | 5.11 | 4.38 |
| Subtotal | 33.45\% | 23.13\% | ${ }^{11.35 \%}$ | ${ }^{9.77 \%}$ | 15.44\% |
| Total spending in Continental dollars (face value) | \$20,064,667 | \$26,426,333 | \$66,965,269 | \$149,703,857 | \$82,908,320 ${ }^{\text {a }}$ |
| Authorized emissions of Continental dollars by | \$19,937,220 <br> [June $1775-$ <br> July 1776] | $\$ 18,000,000$ <br> [Nov. 1776- <br> Dec. 1777] | $\$ 63.500,300$ <br> [Jan. 1778- <br> Dec. 1778] | S98,552,480 <br> [Jan. 1779- <br> Nov. 1779] | 0 |
| Congress (face value) <br> Deficit of Continental dollars (face value) | \$127.447 | \$8,426,333 | \$3.464.969 | \$51,151,377 | \$82,908,320 ${ }^{\text {a }}$ |


| Type of expense | Percentage of total spent per year |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { June I775- } \\ & 1776 \end{aligned}$ | 1777 | 1778 | 1779 | $1780{ }^{\text {a }}$ |
| Made up for by: domestic interest-bearing loans (bonds) in Continental dollars (face value) | o | $\$ 7,342,275$ <br> [Before <br> Mar. 1778] | $\begin{aligned} & \$ 4,675, \mathrm{II} 13 \\ & \text { [Mar. I778 to } \\ & \text { Sept. I778] } \end{aligned}$ | \$21,372,02I <br> [Sept. 1778 <br> to Sept. <br> 1779] | \$13,169,826 <br> [Sept. 1779 <br> to Mar. <br> 1780] |
| Domestic deficit in Continental dollars (face value) | \$127,447 | \$1,084,058 | $\begin{aligned} & +\$ \mathrm{I}, 210,144 \\ & \text { [surplus] } \end{aligned}$ | \$29,779,356 | \$69,738,494 ${ }^{\text {a }}$ |
| Made up for by (?): <br> Foreign loans and gift aid (in Spanish dollars) ${ }^{\text {b }}$ | \$185,200 | \$590,325 | \$3,368,325 | \$432,000 | \$555,600 |
| Converted to <br> Continental <br> dollars (face <br> value) ${ }^{\text {c }}$ | \$185,200 | \$1,770,975 | \$16,841,625 | \$8,640,000 | \$22,224,000 |
| Residual deficit-made up for by (?): [Quartermaster notes, indents, warrants (IOUs), and direct state loans in Continental dollars at face value, plus confiscations] | $+\$ 57,753$ <br> [surplus applied to 1777] | $+\$ 744,760$ <br> [surplus applied to 1778] | $\begin{aligned} & +\$ 18,796,529 \\ & \text { [surplus } \\ & \text { applied to } \\ & \text { I779] } \end{aligned}$ | \$2,342,827 | \$47,514,494 ${ }^{\text {a }}$ |



Money from abroad

## Foreign aid and loans

- The U.S. gets much help from abroad.
- Covert French and Spanish help starts in 1775: Roderigue Hortalez and Company, managed by Pierre Beaumarchais. Each country contributes 270,000 pesos.
- Direct delivery of weapons and supplies by France and Spain.
- Importance of the Declaration of Independence in terms of borrowing: convinces France and Dutch bankers that the colonies are committed.
- French loans of over $\$ 2$ million.
- Spanish help of at least $1,216,000$ pesos. Particularly important to allow French Admiral de Grasse to take his fleet to Yorktown.
- Dutch loan in 1782 negotiated by John Adams.




## The Continental dollar

## The "money" problem

- The absence of reliable and adequate means of payment has been a problem for the colonies from the start.
- For example, in 1715 , North Carolina designated 16 commodities as legal tender, including cheese, butter, feathers, and whale oil.
- In fact, this is a constant bone of contention between English America and Britain.
- Few circulating gold and silver coins, mostly Spanish pesos (also known as Spanish dollars).
- And it has led to many monetary experiments: the first forms of paper money.



THE CURRENCY OF EMPIRE MONEY and POWER IN SEVENTEENTH-CENTURY ENGLISH AMERICA

JONATHAN BARTH


## The U.S. first national currency

- On May 11, 1775, Massachusetts informs Congress that it will issue interest-bearing bonds redeemable in two years at face value in specie to pay for its emergency war expense.
- New Hampshire gives Massachusetts's bonds legal tender value in June.
- New York opposes generalizing these issuances or giving them legal tender value.
- On June 23, 1775, Congress adopts New York's recommendation, and it creates a currency union: the Continental dollar.
- Strictly speaking, the Continental dollar is a bill of credit, an unbacked IOU issued by a government that the holder can redeem in the future. Often circulates much like currency.
- Although individual states keep their sovereign power to issue their own paper money (only eliminated by the Constitution).


THE CONTINDNTAL DOMHAB

How the American Revolution Was
Financed wuith Paper Money
FARLEY GRUBB

## The Continental dollar as a zero-coupon bond

- States commit to redeem the dollars at face value (in Spanish milled dollars) in gold or silver after the Revolution and cover any shortfall (Congress, however, does not have the power to compel states to do so).
- No legal tender (except for soldiers and other Congressional employees) and large denominations.
- From 1777 to 1781 , Congress asks the individual states to make the Continental dollar legal tender.
- Recall that $\$ 1$ in 1775 is about $\$ 50$ in 2023.
- Minimal provision of replacement bills to swap worn and ragged Continental dollars.
- Thus, the best way to think about the Continental dollars is as bearer zero-coupon bonds.
- Well understood by contemporaries. Check, in particular, James Madison's Treaty on Money (https://founders.archives.gov/documents/Madison/01-01-02-0103).





## Different emissions

- Total of 11 emissions (with several tranches).
- Each new emission has a different engraving and authorization stamp to make the point that their value is different:
- Problem to use the Continental dollar as a unit of account: different value depending on the redemption date (usefulness of legal tender laws?).

figure a.i. Net new Continental dollars emitted each year from 1775 through 1779 (face value)-various estimates

figure a.2. The Continental dollar: cumulative total net new emissions outstanding to date (face value), $1775-8 \mathrm{I}$ - various estimates
table i.i Continental dollar redemption/maturity dates set by congressional legislation

| Procedural authorization dates | Date printed on the bill (emission no.) | Specie redemption option | Redemption/maturity dates | Current new emission | Redemption order applied to other emissions |
| :---: | :---: | :---: | :---: | :---: | :---: |
| July 29, 1775 | May io, 1775 (emission no. 1) | Yes | 1/4 on or before Nov. 30, 1779 | \$1,000,000 ${ }^{\text {d }}$ | to \$2,000,000 from |
|  |  |  | $1 / 4$ on or before Nov. 30, 1780 |  | June 22, 1775 |
|  |  |  | $1 / 4$ on or before Nov. 30, 1781 |  |  |
|  |  |  | $1 / 4$ on or before Nov. 30, 1782 |  |  |
| Dec. 26, 1775 | Nov. 29, 1775 (emission no. 2) | Yes | $1 / 4$ on or before Nov. 30,1783 | \$3,000,000 |  |
|  |  |  | $1 / 4$ on or before Nov. 30,1784 |  |  |
|  |  |  | $1 / 4$ on or before Nov. 30,1785 |  |  |
|  |  |  | $1 / 4$ on or before Nov. 30,1786 |  |  |
| Feb. 21, 1776 | Feb. 17, 1776 (emission no. 3) | - | " $[\mathrm{O}] \mathrm{n}$ the same security as the sums of money heretofore emitted" | \$3,937,220 |  |
| May 22, 1776 | May 9, 1776 (emission no. 4) | Yes ${ }^{\text {a }}$ | " $[1] n$ such manner $\ldots$ as Congress shall hereafter direct" ${ }^{\text {a }}$ | \$5,000,000 |  |
| Aug. 13, 1776 | July 22, 1776 (emission no. 5) | Yes ${ }^{\text {a }}$ | " | \$5,000,000 |  |
| Nov. 2, 1776 | Nov. 2, 1776 (emission no. 6) | - | " | \$5,000,000 |  |
| Feb. 26, 1777 | Feb. 26, 1777 (emission no. 7) | - | "[P]eriods . . that shall be fixed by Congress ${ }^{\text {a }}{ }_{\text {a }}$ | \$5,000,000 |  |
| May 22, 1777 | May 20, 1777 (emission no. 8) | - | Nothing mentioned | \$5,000,000 |  |
| Aug. 15, 1777 | " | - | " | \$1,000,000 |  |
| Nov. 7, 1777 | " | - | " | \$1,000,000 |  |
| Dec. 3, 1777 | " | - | " | \$1,000,000 |  |
| Jan. 8, 1778 | " | - | " | \$1,000,000 |  |
| Jan. 22, 1778 | " | - | " | \$2,000,000 |  |
| Feb. 16, 1778 | " | - | " | \$2,000,000 |  |
| Mar. 5, 1778 | " | - | " | \$2,000,000 |  |
| Apr. 4, 1778 | " | - | " | \$1,000,000 |  |
| Apr. 11, 1778 | Apr. 11, 1778 (emission no. 9) | - | " | \$5,000,000 |  |
| Apr. 18, 1778 | May 20, 1777 (emission no. 8) | - | " | \$500,000 |  |
| May 22, 1778 | Apr. 11, 1778 (emission no. 9) | - | " | \$5,000,000 |  |
| June 20, 1778 | " | - | " | \$5,000,000 |  |
| July 30, 1778 | " | - | " | \$5,000,000 |  |
| Sept. 5, 1778 | " | - | " | \$5,000,000 |  |
| Sept. 26, 1778 | Sept. 26, 1778 (emission no. 10) | - | " | \$10,000,100 |  |


| Nov. 4, 1778 | " | - | " | \$10,000,100 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Dec. 14, 1778 | " | - | " | \$10,000,100 |  |
| Jan. 2, 1779 | Jan. 14, 1779 (Emission no. 11) | Yes ${ }^{\text {b }}$ | $\$ 15,000,000$ for 1779 and annually $\$ 6,000,000$ for 18 years to Jan. I, 1797, with any additional emissions in 1779 redeemed in the same manner and within the same time period ${ }^{\text {c }}$ | \$8,500,395 | To all prior emissions and to all subsequent emissions to 1780 |
| Feb. 3, 1779 | Sept. 26, 1778 (emission no. 10) | Yes ${ }^{\text {b }}$ | nothing new added | \$5,000,160 |  |
| Feb. 19, 1779 | " | Yes ${ }^{\text {b }}$ | " | \$5,000,160 |  |
| Apr. I, 1779 | " | Yes ${ }^{\text {b }}$ | " | \$5,000,160 |  |
| May 5, 1779 | " | Yes ${ }^{\text {b }}$ | " | \$10,000,100 |  |
| June 4, 1779 | " | Yes ${ }^{\text {b }}$ | " | \$10,000,100 |  |
| July 17, 1779 | Jan. 14, 1779 (emission no. 11) | Yes ${ }^{\text {b }}$ | " | \$5,000,180 |  |
| July 17, 1779 | Sept. 26, 1778 (Emission no. 10) | Yes ${ }^{\text {b }}$ | " | \$10,000,100 |  |
| Sept. 17, 1779 | Jan. 14, 1779 (emission no. 11) | Yes ${ }^{\text {b }}$ | " | \$15,000,260 |  |
| Oct. 14, 1779 | " | Yes ${ }^{\text {b }}$ | " | \$5,000,180 |  |
| Nov. 17, 1779 | " | Yes ${ }^{\text {b }}$ | " | \$10,050,540 |  |
| Nov. 29, 1779 | " | Yes ${ }^{\text {b }}$ | " | \$10,000,140 |  |

## A \$7 note?

- Bizarre denomination structure (e.g., in first emission $\$ 7$ note but not $\$ 10$ !).
- Probably aimed at making the Continental dollar hard to use as a medium of exchange.
- When, on November 22, 1777, Congress asks the states to limit their emission of state paper monies, it explicitly exempts small-value state currencies because of their usefulness as small change instead of Continental dollars.
table 3.I Denominational spacing


## Colony/nation

| Currency | Factor average | Factor mode | Factor range |
| :--- | :--- | :--- | :--- |
| Modern Nations |  |  |  |
| US dollar | 2.4 I | 2.00 | 2.00 to 5.00 |
| Euro | 2.18 | 2.00 | 2.00 to 2.50 |
| Yen | 3.06 | 2.00 | 2.00 to 5.00 |
| I775-79 (American Revolution) |  |  |  |
| US Continental dollar | I .36 | I .50 | I .08 to 2.50 |
| I775-77 (American Revolution) |  |  |  |
| Virginia currency | I .39 | I .25 | I .20 to 2.00 |
| Pennsylvania currency | I .30 | 2.00 | I .07 to 1.60 |
| New Jersey currency | I .84 | I .25 to 2.00 |  |
| New York currency | I .60 | 2.00 |  |
| I755-64 (Seven Years' War) |  | $\mathrm{I} .33 / \mathrm{I} .50$ | I .25 to 2.00 |
| Virginia currency | I .82 | 2.00 | I .25 to 2.50 |
| Pennsylvania currency | I .62 | 2.00 | I .25 to 2.00 |
| New Jersey currency | I .84 | I .73 |  |
| New York currency |  |  |  |

Sources: Derived from tables B. I, B.2, and B.3.
Notes: The factor spacing is calculated by taking the value $\left(X_{\mathrm{t}}\right)$ of a denomination $\left(d_{\mathrm{t}}\right)$ at location $(t)$ and dividing it into the value of the next higher denomination, i.e., $\left(X_{\mathrm{t}+1} d_{\mathrm{t}+1} / X_{\mathrm{t}} d_{\mathrm{t}}\right)$. The average factor spacing is the summation of factor spacing across the full range of denominations emitted into circulation, i.e.,
N
[ $\left.\sum\left(X_{\mathrm{t}+1} d_{\mathrm{t}+1} / X_{\mathrm{t}} d_{\mathrm{t}}\right)\right] /(N-1)$, where $N=$ the complete sequential list of denominations.
$\mathrm{t}=1$

TABLE 3.2 Distribution of denominational sizes by number of units emitted

| Currency | Measured in 2012 US dollar equivalents |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Percentage below |  |  |  | Percentage above |  |
|  | \$5 | \$10 | \$15 | \$20 | \$50 | \$IOO |
| I775-79 (American Revolution) |  |  |  |  |  |  |
| US Continental Dollar | 0.00 | 3.69 | 7.38 | 11.07 | 8I.91 | 69.27 |
| 1775-77 (American Revolution) |  |  |  |  |  |  |
| Virginia currency | 0.00 | 23.72 | 47.43 | 47.43 | 42.36 | 34.5I |
| Pennsylvania currency | 56.00 | 65.40 | 72.90 | 74.80 | 18.70 | II 1.40 |
| New Jersey currency | 0.00 | 4 I .40 | 4 I .40 | 55.80 | 31.80 | I 1.90 |
| New York currency | 31.90 | 53.80 | 57.80 | 76.40 | 14.40 | 7.20 |
| I755-64 (Seven Years' War) |  |  |  |  |  |  |
| Virginia currency | 0.00 | 31.20 | 48.00 | 48.00 | 35.30 | 22.40 |
| Pennsylvania currency | 26.80 | 38.80 | 50.20 | 50.20 | 36.10 | 14.20 |
| New Jersey currency | 0.00 | 41.00 | 41.00 | 50.30 | 53.00 | 27.20 |
| New York currency | 0.00 | 0.00 | 0.00 | 0.00 | 95.70 | 91.60 |

## The value of a Continental dollar

## James Madison, Treatise on Money

Being engaged in a necessary war without specie to defray the expence, or to support paper emissions for that purpose redeemable on demand, and being at the same time unable to borrow, no resource was left, but to emit bills of credit to be redeemed in future. The inferiority of these bills to specie was therefore incident to their very nature. If they had been exchangeable on demand for specie, they would have been equivalent to it; as they were not exchangeable on demand, they were inferior to it. The degree of their inferiority must consequently be estimated by the time of their becoming exchangeable for specie, that is the time of their redemption.

- Continental dollar must circulate at a discount even if the probability of redemption is 1 .
- With a $6 \%$ discount rate, a dollar issued in 1775 to be redeemed in 1779 has a value of around 78 cents.
- Interestingly, this makes the pay of a Continental private (\$62 a year; the main use of the Continental dollars) roughly equivalent to that of a British one ( $\$ 55$ a year in specie).



## Counterfeit continentals

## Thomas Paine to General Sir William Howe

England will hereafter abound in forgeries, to which art the practitioners were first initiated under your authority in America. You, sir, have the honor of adding a new vice to the military catalogue; and the reason, perhaps, why the invention was reserved for you, is, because no general before was mean enough even to think of it.

- The British undertake a covert program of counterfeiting the Continental dollar.
- Starts the HMS Phoenix, a gunboat anchored in New York harbor.
- Stephen Holland, from Londonderry, N.H., organizes a network of friends and acquaintances to pass counterfeit Continental dollars.


FROM CRIME TO PUNISHMENT
Counterfzit and Debased Currencibs in Colonial and Pre-Fzderal America


Philit L. Mossman

## Continental coins?

- A few Continental dollar coins (Fugio or Franklin dollar) might have been minted in 1776 on pewter, brass, and silver planchets.
- Documentation about them is scarce.
- Some authors even denied they existed. Commemorative tokens?



## A reasonable basic design

- Basic economics tells you you want to finance a war by issuing debt and smooth taxes over time. Also, consistent with the idea of a zero coupon.
- Redemptions quotas were roughly allocated by population shares.
- States were free to determine how to tax and redeem the Continental dollars. Citizens from states that would no longer redeem Continental dollars could redeem directly from the Treasury (geographical heterogeneity in Congressional spending due to military campaigns).
- Redemption windows were emission-specific and linked to reasonable tax revenue expectations (per-white-capita tax level of $\approx \$ 0.33$ ).
- States could make up shortfalls in specie.
- The whole Continental dollar design is fully consistent with the fiscal theory of the price level.

| State | $1780 \%$ of population: total \{white only\} | Initial Continental dollar (I775) redemption quota \% | Recommended <br> Nov. 22, 1777 , <br> funding \% | Troop quota \% |  |  | Remaining Continental dollar (178I) redemption quota \% | Funding \% <br> set Apr. 1783 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1777 | 1778 | $\begin{aligned} & 1779 \\ & \& \\ & 1780 \end{aligned}$ |  |  |
| New Hampshire | 3.16 \{3.96\} | 4.14 | 4.00 | 3.41 | 3.49 | 3.75 | 2.67 | 3.51 |
| Massachusetts | II. 43 \{14.17\} | 14.47 | 16.40 | 17.07 | 17.44 | 18.75 | 15.33 | 14.96 |
| Rhode Island | 1.90 22.28$\}$ | 2.40 | 2.00 | 2.27 | I.16 | 2.50 | I. 33 | 2.15 |
| Connecticut | 7.43 \{9.1I] | 8.27 | 12.00 | 9.09 | 9.30 | 10.00 | 11.33 | 8.81 |
| New York | 9.29 \{10.75\} | 8.27 | 4.00 | 4.55 | 5.8 I | 6.25 | 5.00 | 8.55 |
| New Jersey | 5.02 \{5.86\} | 5.38 | 5.40 | 4.55 | 4.65 | 3.75 | 6.00 | 5.56 |
| Pennsylvania | II.77 \{I4.49\} | 12.4I | 12.40 | 13.64 | II. 62 | 13.75 | 15.33 | 13.68 |
| Delaware | 1. 63 \{1.92\} | I. 24 | 1.20 | I.I4 | I.16 | I. 25 | I.I3 | 1.50 |
| Maryland | 8.83 \{7.48\} | 10.34 | 10.40 | 9.09 | 9.30 | 10.00 | 10.53 | 9.43 |
| Virginia | 20.97 \{16.II $\}$ | 16.54 | 16.00 | 17.05 | 17.44 | 13.75 | 16.67 | 17.10 |
| North Carolina | 10.08 \{8.51\} | 8.27 | 5.00 | 10.23 | 10.47 | 7.50 | 6.67 | 7.27 |
| South Carolina | 6.47 \{3.76\} | 8.27 | 10.00 | 6.82 | 6.98 | 7.50 | 8.00 | 6.41 |
| Georgia | 2.02 \{1.60\} | - | I. 20 | I.I4 | I.16 | I. 25 | - | 1.07 |
| Respective totals | $\begin{gathered} 2,708,369 \\ \{2,204,949\} \end{gathered}$ | \$3,000,000 | \$5,000,000 | 59,840 | 44,892 | 83,520 | \$195,000,000 | $\begin{aligned} & \$ 1,500,000 \\ & \text { (annually) } \end{aligned}$ |

## Who came up with this design?

- Some indication that Congress thought carefully about these issues.
- Committee on paper money created on November 23, 1775.
- Probable role of Richard Smith (1735-1803), delegate from New Jersey.

1. Present in all relevant sessions.
2. Talks about technical issues of the Continental dollar in his diary (the proceedings from September 12 to October 1, 1775, and from December 12, 1775, to March 30, 1776).
3. Brother of New Jersey state treasurer.
4. Similitudes between New Jersey paper money and Continental dollar.



## Loan office certificates

- Congress borrowed back Continental dollars through loan certificates.
- Nominative.
- Explicit issuance and redemption dates and interest rates.
- Large denominations.
- Around one-third of Continental dollars were borrowed back by Congress and re-spent.

RECEIVED of John Lawrence, Commiffioner of, the Loan Office for the State of Connecticut, Enc vel of B. les. Grehange
Dollars it being for the Intereft arifen of Continental Certificates, in favour of

$$
\text { from the } 10 \text {. of sep.? } 1478 \text { o the } 10^{3} \text { :of } 10 / \sqrt{2} 119 \text {. }
$$

$$
\therefore \text { - The Numbers of faid Certificates are el }
$$

ane f thine their dress of olla el

I fay, received at Hartford, this 2 Day of Serin 1779

$$
\left.\begin{array}{l}
\text { Sh ye Biel in the hame } \\
\text { of doc in normeded } \\
1 . j 300 . \text { tens }
\end{array}\right\} \text { By }
$$

Mesas, Head l

## table 8.i Loan office certificates: Amounts, conditions, and dates authorized


table 8.2 Loan office certificates issued for Continental dollars by state to March 3, $\mathbf{1 7 8 3}$

| State | Face value: beginningFeb. 28, 1778 | Face value: <br> Mar. I, 1778- <br> Sept. 10, 1779 | Face value: <br> Sept. Io, 1779-Dec. 31, $1779^{\text {a }}$ | Face value: <br> Dec. 31, 1779-Sept. 30, $1780^{\mathrm{b}}$ | Face value: cumulative total as of Nov. 10, $1780^{\text {b }}$ | Face value: <br> Nov. 10, 1780- <br> Mar. $3,1783^{m}$ | Face value: cumulative total as of Mar. 3 , $1783^{\text {n }}$ | Residual on hand and unlent ${ }^{\circ}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| New | \$350,000 | \$445,717 | \$34,283 | \$142,700 | \$972,700 | \$0 | \$972,700 | \$602,300 |
| Hampshire |  |  |  |  |  |  |  |  |
| Per white capita | \$4.01 | \$5.1I | \$. 039 | \$1.64 | \$10.63 | \$0.00 | \$10.63 | \$6.90 |
| Massachusetts | 2,068,200 | 3,075,000 | 1, 1 15,200 | $\begin{gathered} 987,700 \\ {[\mathrm{I}, 287,700]} \end{gathered}$ | $\begin{gathered} 7,246,100 \\ {[7,546,100]} \end{gathered}$ | $\begin{gathered} 846,807 \\ {[546,807]} \end{gathered}$ | 8,092,907 | 50,893 |
| Per white capita | 6.71 | 0.98 | 3.57 | 3.16-4.12 | 23.19-24.15 | 1.75-2.71 | 25.90 | 0.16 |
| Rhode Island | 608,846 | $857,84 \mathrm{I}$ | 236,013 | 164,000 ${ }^{\text {c }}$ | 1,866,700 ${ }^{\text {c }}$ | ${ }^{100}$ | 1,866,800 | 1,109,500 |
| Per white capita | 12.11 | 17.06 | 4.69 | 3.26 | 37.13 | 0.oo | 37.13 | 22.07 |
| Connecticut | 947,375 | 2,286,600 | 551,025 | 508,200 | 4,293,200 | 0 | 4,293,200 | 250,300 |
| Per white capita | 4.72 | 11.39 | 2.74 | 2.53 | 21.38 | 0.00 | 21.38 | 1.25 |
| New York | 850,000 | 1,660,723 | 369,277 ${ }^{\text {d }}$ | 625,800 ${ }^{\text {c }}$ | 3,505,800 ${ }^{\text {c }}$ | 4,000 | 3,509,800 | 851,200 |
| Per white capita | 3.59 | 7.01 | I. 56 | 2.64 | 14.79 | I. 69 | 14.81 | 3.59 |
| New Jersey | 370,900 | 1,298,724 | 2,708,276 ${ }^{\text {t }}$ | - | 4,377,900 ${ }^{\text {f }}$ | 172,000 | 4,549,900 | 193,600 |
| Per white capita | 2.87 | 10.05 | 20.97 |  | 33.89 | I. 33 | 35.22 | 1.50 |
| Pennsylvania | 2,074,400 | 10,316,300 | 4,739,300 | 9,281,600 ${ }^{\text {8 }}$ | 26,411,600 ${ }^{\text {s }}$ | 2,110,900 | 28,522,500 | 311,800 |
| Per white capita | 6.49 | 32.29 | 14.84 | 29.05 | 82.68 | 6.61 | 89.29 | 0.98 |
| Delaware | 39,176 | 221,731 | 142,793 | $\begin{array}{r} 92,200^{f} \\ {[107,700]} \end{array}$ | $\begin{gathered} 495,900^{f} \\ {[5 \mathrm{I}, 400]} \end{gathered}$ | $\begin{gathered} 41,100 \\ {[25,600]} \end{gathered}$ | 537,000 | 273,500 |
| Per white capita | 0.92 | 5.23 | 3.37 | 2.18-2.54 | 11.70-12.06 | 0.60-0.97 | 12.67 | 6.45 |
| Maryland | 93,600 | 2,691,400 | 273,400 | 807,900 | 3,866,300 | 127,000 | 3,993,300 | 448,900 |
| Per white capita | 0.57 | 16.32 | 1. 66 | 4.90 | 23.44 | 0.77 | 24.21 | 2.72 |
| Virginia | 57,000 | 3,068,200 | $-275,10{ }^{\text {b }}$ | 57,200 ${ }^{\text {i }}$ | $\begin{array}{r} 2,907,300^{\mathrm{h}} \\ {[3,182,400]} \end{array}$ | $\begin{gathered} 52,500 \\ {[-222,600]^{\mathrm{h}}} \end{gathered}$ | 2,959,800 | 477,200 |


| Per white capita | 0.18 | 9.67 | ? | 0.18 | $9.16-10.03$ | 0.00-0.17 | 9.32 | I. 50 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| North Carolina | 33,700 | 33,000 | - | - | $\begin{array}{r} 66,700^{j} \\ {[740,000]} \\ \{756,000\} \end{array}$ | $\begin{aligned} & 1,143,100 \\ & {[469,800]} \\ & \{453,800\} \end{aligned}$ | I,209,800 | 474,700 |
| Per white capita | 0.19 | 0.18 |  |  | $0.37-4.22$ | 2.53-6.38 | 6.75 | 2.65 |
| South Carolina | 52,000 | 31,250 | 3,18I,208 ${ }^{\text {k }}$ | - | 3,264,458 | 581,947 | 3,846,405 | 720,595 |
| Per white capita | 0.63 | 0.38 | 38.33 |  | 39.33 | 7.01 | 46.34 | 8.68 |
| Georgia | - | - | - | - | - | 951,000 | 951,000 | 151,000 |
| Per white capita |  |  |  |  |  | 26.99 | 26.99 | 4.28 |
| Total sum | \$7,545,197 | \$25,986,486 | \$13,075,675 | \$12,667,300 | \$59,229,658 ${ }^{1}$ | \$6,075,454 ${ }^{\text {m }}$ | \$65,305,112 | \$5,915,488 |
| Per white capita | \$3.50 | \$I2.04 | $\$ 6.06$ | \$5.87 | \$27.44 | \$2.8I | \$30.25 | \$2.74 |
| Maximum |  | [\$26,188,909] | \$13,350,775 | \$12,982,800 | \$60,509,558 ${ }^{1}$ | \$4,795,554 |  |  |
| Alternative totals |  | \$12.13 | \$6.18 | \$6.0I | \$28.03 | \$2.22 |  |  |
| Lottery loan office certificates issued |  |  |  |  |  |  | \$1,763,000 |  |
| Per white capita |  |  |  |  |  |  | \$0.82 |  |
| Grand total for all loan office certificates issued or paid out |  |  |  |  |  |  | \$67,068, I 12 |  |
| per white capita |  |  |  |  |  |  | \$31.07 |  |
| Grand total of all loan office certificates printed ${ }^{p}$ |  |  |  |  |  |  | \$72,983,600 |  |
| Per white capita |  |  |  |  |  |  | \$33.8I |  |

table 8.3 Loan office certificates still on hand and unlent by state as of November 10,1780

| State | As of | Total nominal (face) value | Per white capita | As a percentage of total certificates lent and remaining on hand ${ }^{\text {b }}$ |
| :---: | :---: | :---: | :---: | :---: |
| New Hampshire | Sept. 30, 1780 | \$602,300 | 6.90 | 39.37\% |
| Massachusetts | Sept. 30, 1780 | 597,700 | I.91 | 7.34 |
| Rhode Island | July 31, 1780 | 1,109,600 | 22.07 | 37.28 |
| Connecticut | Aug. 3I, 1780 | 250,300 | I. 25 | 5.5 I |
| New York | July 31, 1780 | 855,200 | 3.61 | 19.61 |
| New Jersey | Aug. 3I, 1780 | 368,600 | 2.85 | 7.77 |
| Pennsylvania | Oct. 31, 1780 | 2,422,700 | 7.58 | 8.40 |
| Delaware | Aug. 3I, i780 | 299,100 | 7.06 | 36.90 |
| Maryland | Sept. 30, 1780 | 575,900 | 3.49 | 12.96 |
| Virginia | Sept. 30, 1780 | 529,700 | I. 67 | 14.27 |
| North Carolina | Sept. 10, 1779 | 628,000 | 3.5 I | 45.38 |
|  | Nov. 10, 1780 | $(306,500)^{\text {a }}$ | (5.22) ${ }^{\text {a }}$ | (55.28) |
| South Carolina | May 6, i78o | 1,302,542 | 15.69 | 28.52 |
| Georgia | No returns reported | $(\mathrm{I}, 102,000)^{\text {a }}$ | (31.27) ${ }^{\text {a }}$ | (100.00) |
| Total |  | \$9,541,642) | 4.42 | 13.62 |
|  |  | (\$10,950,142) ${ }^{\text {a }}$ | (5.07) ${ }^{\text {a }}$ | (15.32) |

## Did the Continental dollar work?

- Continental dollars fulfilled their role: up to 1779 , Continental dollars paid for $77 \%$ of Congress expenditures.
- After 1779, the value of the Continental was destroyed by a combination of a long war and poor policy choices by Congress:
- January 2, 1779 redemption rule.
- March 20, 1780 redemption rule and introduction of state-issued Continental dollars.
- Why? New personnel (John Adams, Benjamin Franklin, John Jay, John Hancock, Thomas Jefferson, Henry Laurens, Robert Morris, and Richard Smith are gone)? Debt hawks? Private gains?.
- Lack of fiscal credibility.
- By 1781 , the exchange rate was $\$ 225$ in paper money for $\$ 1$ of hard specie. Circulation largely ends.

(Measured in two-month units)





## After 1781

- Financing situation reaches a breaking point in January 1781: Pennsylvania Line Mutiny, ten Continental Army regiments demand higher pay and better housing from Congress.
- Robert Morris becomes the Superintendent of Finance in May 1781.
- In turn, to students' complaints for generations, he appointed Gouverneur Morris as his deputy.
- Role in the Newburgh Conspiracy?
- Corruption?


## Robert Morris

Revolutionary Financier, with an Analyxix of His Earlicr Carcer

Clarence L. Ver Steeg


## The financier

- Morris tries to set up a more permanent basis for the financial affairs of the U.S.
- Two principles:

1. He believes in markets.
2. He is a strong nationalist (personal interests and experience).

- Morris creates the Bank of North America (307 Chestnut Street in Philadelphia).

1. The legal successor is Wells Fargo.
2. For some time, the largest shareholder is John Paul Jones.

- Start of a long struggle in the U.S. constitutional and political thought about the role of central banking.
- Recall that what we understand as "central banking" has changed over time.


## The aftermath

- By 1790 , the states had redeemed and removed $60 \%$ of all Continental dollars.
- Rest of Continental dollars were partially defaulted by the 1790 Funding Act.
- See slides on Hamilton's debt program.


## A partial recovery

## The recovery from the War

- The recovery of economic activity from the War is painfully slow:
- McCusker and Menard (1985) estimate that GDP per capita declines by $46 \%$ in 1790 compared to 1774 . In comparison, the decline during the Great Depression was $48 \%$.
- More recently, Lindert and Williamson (2016) document a decline in income between $15 \%$ and $20 \%$ between 1774 and 1800. Since income grew in the 1790s (e.g., $1 \%$ a year), the decline between 1774 and 1790 must have been around $36 \%$
- Wealth per capita is $\approx 15 \%$ lower in 1805 than in 1774 .
- Exports $25 \%$ lower in 1791 compared to $1768-72$. The South is hit the hardest.
- However, we need to be a bit skeptical about the size of the economic decline:
- It is hard to find the type of agonizing accounts of poverty that are plentiful concerning the Great Depression.
- Some authors, such as Middlekauff (2007), defend that recovery was rapid though uneven.


## Regional heterogeneity

- The mid-Atlantic states appear to have recovered the most quickly, substituting a growing local market for the loss of some foreign markets.
- Also increased the degree of manufacturing, some of which is shipped to the south.
- New England's recovery was somewhat slower. It could not replace the demand for cod, whale oil, or shipping that took place with the British West Indies. By 1786, cod fishing was still only $80 \%$ of its pre-War level.
- French West Indies, Portugal, and Spain provide some substitute markets.
- Some activity is re-directed to trade with the South.
- Southern states recovered slowly. Lost the rice bounty supplied by Great Britain, and indigo production fell. Carolina planters struggled.


## Imperial trade

## James Madison

The Revolution has robbed us of our trade with the West Indies, the only one which yielded us a favorable balance without opening any other channels to compensate for it... In every point of view, the trade of this country is in a deplorable condition.

- Loss of privileged trade access to Empire is not offset by new markets.
- After the end of the war, the British Government bans U.S. ships in the British West Indies and imposes duties on certain goods.
- The 5 million pound trade deficit with the British over 1784-86 can no longer be made up with trade to British West Indies.
- Loss of 1.3 million pounds of specie leads to deflation of $12 \%$ in 1783 .
- This loss of trade also has a serious impact on the British West Indies, with widespread food shortages.


## The bright spots

- However, overseas trade outside the British Empire regains life with remarkable ease.
- Other countries welcome U.S. ships, and although the British West Indies were excluded, Great Britain itself accepts U.S. ships on the same footing as they did from her colonies.
- Virginia's Planters can now sell tobacco directly to Europe. Tobacco sales were lower in the 1780 s than before the war, but full recovery was not far off.
- Prices for tobacco and wheat remained high in the 1780 s.

| DESTINATION | 1768-1772 | PERCENTAGE OF TOTAL | 1790-1792 | PERCENTAGE OF TOTAL |
| :---: | :---: | :---: | :---: | :---: |
| Great Britain and Ireland | 1,616 | 58 | 1,234 | 31 |
| Northern Europe | - | - | 643 | 16 |
| Southern Europe | 406 | 14 | 557 | 14 |
| British West Indies | 759 | 27 | 402 | 10 |
| Foreign West Indies | - | - | 956 | 24 |
| Africa | 21 | 1 | 42 | 1 |
| Canadian Colonies | - | - | 60 | 2 |
| Other | - | - | 59 | 2 |
| Total | 2,802 | 100\% | 3,953 | 100\% |

Note: -, not applicable.

## TABLE 7.2 AVERAGE ANNUAL EXPORTS FROM THE 13 COLONIES, 1768-1772, AND THE UNITED STATES, 1791-1792 (IN THOUSANDS OF POUNDS STERLING, 1768-1772 PRICES)

| ORIGIN | 1768-1772 |  |  | 1791-1792 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | TOTAL <br> EXPORTS | PERCENTAGE OF TOTAL | PER CAPITA EXPORTS | TOTAL <br> EXPORTS | PERCENTAGE OF TOTAL | PER CAPITA EXPORTS |
| New England | 477 | 17 | 0.82 | 842 | 22 | 0.83 |
| New Hampshire | 46 | 2 | 0.74 | 33 | 1 | 0.23 |
| Massachusetts | 258 | 9 | 0.97 | 542 | 14 | 1.14 |
| Rhode Island | 81 | 3 | 1.39 | 119 | 3 | 1.72 |
| Connecticut | 92 | 3 | 0.50 | 148 | 4 | 0.62 |
| Middle Atlantic | 560 | 20 | 1.01 | 1,127 | 30 | 1.11 |
| New York | 187 | 7 | 1.15 | 512 | 14 | 1.51 |
| New Jersey | 2 | - | 0.02 | 5 | - | 0.03 |
| Pennsylvania | 353 | 13 | 1.47 | 584 | 16 | 1.34 |
| Delaware | 18 | 1 | 0.51 | 26 | 1 | 0.44 |
| Upper South | 1,162 | 41 | 1.79 | 1,160 | 31 | 1.09 |
| Maryland | 392 | 14 | 1.93 | 482 | 13 | 1.51 |
| Virginia | 770 | 27 | 1.72 | 678 | 18 | 0.91 |
| Lower South | 604 | 22 | 1.75 | 637 | 17 | 0.88 |
| North Carolina | 75 | 3 | 0.38 | 104 | 3 | 0.27 |
| South Carolina | 455 | 16 | 3.66 | 436 | 12 | 1.75 |
| Georgia | 74 | 3 | 3.17 | 97 | 3 | 1.17 |
| Total, all regions | 2,803 | 100 | 1.31 | 3,766 | 100 | 0.99 |

Source: Adapted from Shepherd and Walton 1976

## FIGURE 7.1

Per Capita Credits in the U.S. Balance of Payments, 1790-1815


Source: North, Douglass Cecil. "Early National Income Estimates for the United States." Economic Development and Cultural Change 9(3), April 1961. Reprinted by permission of the University of Chicago Press.

FIGURE 7.3
Values of Exports and Reexports from the United States, 1790-1815


Source: North, Douglass Cecil, Economic Growth of the United States 1790-1860, 1st Edition, © 1961, pp. 26, 28. Reprinted by permission of Pearson Education, Inc., Upper Saddle River, NJ.

## Changes within the States, I

- The colonies had a system of "corporate" representation in the colonial legislatures: a town, parish, or county was the basis of representation.
- In none of the 13 colonial legislatures was representation apportioned based on population.
- Situation grows worse as colonies expand into the interior. Also, an English Royal Proclamation in 1765 forbade the colonial legislatures from reapportioning representation.
- Tensions clearly seen in Pennsylvania and South Carolina.


## Changes within the States, II

- Resolutions of May 10, 1776: The Second Continental Congress asks each colony to create new governing structures by writing their first sovereign constitutions.
- Massachusetts, New Hampshire, New York, and Pennsylvania pick a proportional-apportionment system based on population and regularly scheduled reapportionment.
- Why? States with fewer workers and less profitable cash crops.
- The remaining nine states continued with a corporate basis of representation.
- Long-run consequences: education investment.


# Toward to the Constitution 

## Public debt and political uncertainty

- The Revolutionary War causes the accumulation of large debts to France and the Dutch Republic.
- States severely in arrears on payments to Congress.
- Without a reliable revenue stream, Congress cannot borrow nor fund an army to deal with the British occupation of western forts.
- Congress stops interest payments to France in 1785 and defaults on principal payments in 1787 (account not settled until 1795).
- Congress requests amending the Articles to levy a $5 \%$ import duty to pay interest and principal on the debt. But Rhode Island and New York reject. Thus, measure cannot obtain unanimous consent.
- In 1787, Congress sets aside all requirements in favor of having the states pay their debts in any way they chose.



## Prices and political uncertainty

- As mentioned before, the U.S. experiences deflation as specie flow out of the country.
- Seven states resort to printing money (common goods problems).
- Public debt and monetary disarray lead to high uncertainty.
- There are serious doubts concerning the viability of the political experiment.
- Uncertainty leads to the Convention.


## The problems of the Confederation

- Articles of Confederation are a hindrance.
- Article 2: "Each state retains its sovereignty, freedom, and independence, and every power, jurisdiction, and right, which is not by this Confederation expressly delegated to the United States, in Congress assembled."
- And control of trade policy was not delegated to Congress: "no treaty of commerce shall be made whereby the legislative power of the respected States shall be restrained from imposing such imposts and duties on foreigners as their own people are subjected to, or from prohibiting the exportation or importation of any species of goods or commodities whatsoever."
- Great Britain is uninterested in a trade deal as it commands a strategic advantage. Congress cannot regulate trade and hence cannot retaliate against British trade policies.



## Consequences

- For example, when Massachusetts prohibits British ships from loading cargo in its ports, the British switch to New Haven.
- British magazine calls them 13 Dis-united States.
- Collective action problem with no obvious solution.
- Mercantilism is entrenched, and the U.S. is demanding an end to mercantilism and special considerations that no country has granted to any other.
- There was little interest among the French or other European countries to enact trade deals.


## Alexander Hamilton

The vesting of Congress with the power of regulating trade ought to have been a principal object of the Confederation for a variety of reasons. ...it is necessary for the purpose of commerce and revenue.

## The call for a new Constitution

## James Madison

If it be necessary to regulate trade at all, it surely is necessary to lodge the power, where trade can be regulated with effect...
the present system neither has nor deserves advocates...

## James Madison writing to Thomas Jefferson

Most of our political evils may be traced to commercial ones.

## Letter on Hamilton's funding Proposals dated New York, Feb. 3, 1790

The situation of our public debts and the very great embarrassments which attended all our concerns on that account, were the principal causes, of that revolution which has given us the Constitution.

- Economic woes surrounding trade and public debt strongly influence the move toward a Constitutional Convention.
- But other factors are at play as well.



## Shays' rebellion

- The situation is particularly critical in Massachusetts.
- The state did not pass pro-debtor laws (such as forgiveness of debt), no large printings of money inflate away those debts, and taxes are comparatively high.
- Western Massachusetts farmers who cannot pay their debt are having their lands seized.
- A revolt ensues between August 29, 1786, and June 1787. Under the leadership of Daniel Shays, courts are closed, and debtors are released from prison.
- It does not take much on Massachusetts's part to end the rebellion, but it does underline the ineffectiveness of the current political arrangement.
- The rebellion deeply worries many of the political leaders at the time, and it is a significant force in convincing many of the desirability of a constitutional convention.


