In the study of American economic history, it is not standard to ask whether national political independence was essential for the remarkable economic development of the nineteenth and twentieth centuries. In accounts of US economic performance, one may read about entrepreneurship, about technological innovation, about resource abundance, inter-regional trade and migration, perhaps even about policy initiatives in transportation, banking and education; but American writers rarely stop to ask whether these sources of dynamism would have been as effective if the revolution of 1776 had not occurred. To be sure, the constitution of 1787 normally comes in for its share of praise as a guarantor of order, property rights and the inviolability of contracts; but here too the economic record of the nineteenth century is seldom reviewed with an eye towards contingency. A reader of the economic history literature might feel justified in concluding that only ‘economic fundamentals’ really mattered for America’s rise to world leadership, and hence that the only essential role for the nation-state was to step aside and allow these forces full sway. This antiseptic economic history is curious, because political theorists regard the founding of the USA as a pioneering early example of nation building and the rise of national consciousness.¹

The goal of this chapter is to reopen consideration of this neglected topic. Because my intention is to offer an affirmative answer to the question of association between nationhood and economic development, some disclaimers at the outset may be appropriate. To suggest that independent nationhood was essential for American development is by no means to propose a universal formula or even a correlation for economic history generally. It is easy to imagine circumstances where political independence has adverse economic consequences, if for example the independent state comes under the control of powerful interests with an obstructionist agenda. In any particular instance, one has to ask: political independence for whom? Full political autonomy for large numbers of small nation-states might well
be economically perverse, if it fosters military rivalries and local protectionism, and thereby limits the scope for scale economies in production and in the generation of knowledge. Thus, this chapter offers neither a recipe nor a general interpretation of history, only an examination of one important historical case.

As we shall see, US national development was in many ways special and quite possibly non-reproducible, an arrangement in which limitations on the nation-state roles of the member states were as important as any active policies pursued by the centre; yet at the same time they were free to pursue active pro-development agendas, and did so with a vengeance. Whether such an edifice of federalist machinery can be consciously engineered in very different historical settings is questionable. But it is also questionable whether this structure would have emerged under British colonial status, at least within the next century.

**WHAT IS TO BE EXPLAINED?**

According to the best current estimates, some time between 1790 and 1840 the rate of growth of US income per capita accelerated from its colonial level of no more than 0.5 per cent per year, to its modern average between 1.5 and 2.0 per cent per year. This acceleration might seem to constitute a *prima facie* case for the beneficial effects of independence and the constitutional arrangements put into operation in 1789. But the available data do not allow a precise statement of the timing of growth within this period, and the interpretation of such estimates would in any case be subject to debate, in light of the political and economic turbulence touched off by the European wars that prevailed almost continuously between 1793 and 1815. For these reasons, many economic historians are inclined to date the US take-off from approximately 1815, a full generation removed from the state-building events of the 1780s.

Whatever the deficiencies of quantitative evidence, if our *explicandum* were to be limited to the standard indicator of per capita income, and if the question at hand were limited to whether the residents of these territories would have experienced high and rising incomes in the absence of political independence, we could spare ourselves further exertion. We know that the answer is positive, because British colonial North Americans already enjoyed living standards among the highest in the world before the revolution. The technologies and market opportunities emanating from the industrial revolution would surely have spread to British North America in the first half of the nineteenth century, as they did to many other areas
that were politically and institutionally receptive to them. As part of the same broad cultural heritage and demographic pool, Americans would have shared in these new possibilities under virtually any conceivable political regime.

It seems, therefore, that we should set the bar somewhat higher. Growth in per capita income barely scratches the surface of the global significance of American economic development in the nineteenth century. Historians of the industrial revolution now tell that story less in terms of per capita income and real wage growth, and more in terms of the capacity of the British economy to support a larger population at a standard no lower than previously. By analogy, it is appropriate to consider the expansion in size of the American economy as a whole as part of the history that we hope to explain. An exclusive focus on relative per capita growth rates severely understates the American productive achievement of the nineteenth century, because one of the features of US performance was mass immigration from abroad. In this way, the ‘American standard of living’ was shared by large numbers of newcomers, the bulk of whom came from countries with much lower average incomes. Thus for many purposes the growth of US population and the size of the US economy are also legitimate objects of historical study.

It follows that we should also direct attention to the emergence of a viable US manufacturing sector in the nineteenth century, since this was the economic destination for the majority of immigrants. In turn, it follows that American technological developments should also be part of the record to be explained, not only those in manufacturing directly, but also in sectors such as internal transportation, marketing and mining, which complemented and facilitated productivity growth in manufacturing and agriculture. Long before assuming leadership in per capita income, the USA effectively acted like a leader rather than a follower country, by carving out distinctive national approaches to technology, economic organisation and distribution. Here too standard economic measures understate the significance of the US record, because the ‘American system’ in time spread to other parts of the world, as an alternative to European models and methods. As with the industrial revolution, some part of the global acceleration of growth over the past two centuries may be seen as an indirect consequence of US development, albeit an unknown and probably unknowable portion. All of this multifaceted history forms the corpus of what is to be explained, with specific reference to the role of political independence.

One can begin to see why the subject is neglected. The full implications of American economic development were not manifest until the twentieth
century, at which point the revolution was a distant memory, and American independence taken for granted. But political independence in the 1770s was by no means inevitable, and given independence, it was by no means inevitable that US nation building should have taken the shape that it did after 1787. This chapter sets out to explore the economic consequences of these political developments. For reasons of practicality, the focus is on the first half of the nineteenth century, but in truth these consequences go well beyond that era.

**THE NATURE OF AMERICAN NATIONHOOD**

Historians have long debated whether the American Revolution was an economic phenomenon at bottom. Without doubt, disputes over taxes and money were among the flashpoints that led to the escalating political conflicts of the 1770s. But that is not the same as saying that immediate economic issues and interests were uppermost in the minds of the signers of the famous declaration of July 1776. Rather, it seems that chronic contention with Parliament and the king finally persuaded prominent colonials that their long-term political and economic interests would be better served by separation. Independence as a remedy came on the scene late in the game, and its full implications could not have been foretold with confidence in 1776.

There are several reasons why direct economic conflict is now downplayed as a factor in the onset of the revolution. The external commerce of the colonies had long been tightly regulated under the Navigation Acts and other statutes; but these regulations offered benefits as well as costs, and were not a main centre of dispute. Parliament’s prohibitions (in the Currency Acts of 1751 and 1764) on the issuance of paper money by colonial legislatures had more political bite and potential economic impact. But the underlying issues there had mainly to do with political authority as opposed to economic principle, and on this matter they had been largely compromised by the 1770s. In contrast, attempts by Parliament to impose taxes on the colonies (the Stamp Act of 1765, the Townshend duties of 1767) led to mass popular protest. But Egnal and Ernst show that political responses to the tax issue were inconsistent. 3 In their view, protests were largely driven by the interests of urban merchants threatened by import duties but also by periodic crises of indebtedness and excess inventories. The Tea Act of 1772 – not a revenue measure but a bailout of the British East India Company at the expense of colonial merchants – convinced this important interest group to give up on Parliament as protector.
Although these economic conflicts contributed to the coming of the revolution, political independence did not really settle them. The new state and national governments still had to deal with issues of taxation and its legitimacy. They still had to confront periodic financial crises, including the penchant of state legislatures to issue paper currency as a means of alleviating the plight of debtors. The non-decisiveness of the revolution similarly applies to the one issue on which we might identify a true difference in economic interests between Britain and the colonies, namely the desire of farmers, trappers and land speculators to settle and ‘develop’ what they took to be the unoccupied lands to the west. Acutely conscious that continued migration would generate costly conflict with Native American tribes, the British ministry announced as an emergency measure the Royal Proclamation Line of 1763, prohibiting settlement or land purchase on lands west of the Appalachian mountains. Intended as temporary, the policy appeared to become permanent with the Proclamation of 1774 and the Quebec Act of the same year. These restrictive acts may have helped bring on the revolution. But after independence, the same divergent interests reappeared between the financially strapped centre and the expansionist frontier, the new federal government now assigned the role formerly played by Parliament.

Not only were the economic problems and issues much the same, but the new central government was in a far weaker position to deal with them, under the Articles of Confederation and Perpetual Union, the country’s governing document between 1777 and 1789. The Articles gave the federal government only those powers that the colonies recognised as belonging to king and Parliament, and these were precious few. It had no power to tax and no power to limit the states’ rights to collect customs duties. It had the power to establish post offices and collect postage (its only revenue source), to set standards for weights and measures, and to coin money, but no power to limit the states’ issuance of paper money. Each state had one vote, and nine votes out of thirteen were required on important matters such as treaties, borrowing money, raising armed forces, or appointing a commander-in-chief. In the absence of sanctions, raising funds through requisitions from the states worked as poorly as one would expect. Unable to borrow money, to negotiate trade agreements or to settle disputes on the frontier, the new nation was hardly a nation at all. We might well conclude that political independence per se was not a positive contributor to American economic progress.

And yet, in the midst of the chaos of the 1780s, developments in two key areas helped to lay the basis for the events of the nineteenth century.
The first of these was the market for land. Although land sales and land speculation had long been features of American colonial life, these activities were freshly invigorated when the new state constitutions swept away most remaining feudal restraints on inheritance, subdivision and alienation of land. These abolutions are often downplayed as merely the ratification of pre-existing de facto reality, but the new clarity with respect to property rights in land was sufficiently salient to encourage investments in schemes to raise land values. Rothenberg reports that beginning in the decade of the revolution, estates of decedents in Massachusetts came to include shares in such enterprises as bridges, turnpikes, canals and aqueducts. These enterprises were typically sponsored by groups of landowners with a shared interest in the value of property in a particular area. Well before the ambitious state-sponsored canal projects of the nineteenth century, turnpike companies were 'crisscrossing the northern and middle states with a network of moderately improved toll roads'.

The commodification of land extended to the western territories. Though jealously clinging to their rights in monetary affairs, one by one the states ceded their western land claims to the federal government, giving the nation a collective possession of millions of acres. By 1786, Congress was in possession of all the land south of Canada, north of the Ohio, west of the Alleghenies and east of the Mississippi. The southern states followed suit in the 1790s, Georgia being the last to fall into line by 1802. The Land Ordinance of 1785 established what was to be the basis for American public land policy until the Homestead Act of 1862. It provided for a rectangular survey of public lands and a division into townships six miles square, each to consist of thirty-six sections of 640 acres each. Land offices were to be established at convenient points, and lands sold in orderly progress at a price of not less than one dollar an acre. Four sections of every township were to be set aside for the federal government, and one section reserved for the maintenance of public schools. This economic legislation had a political counterpart in the Northwest Ordinance of 1787, which provided for the organisation of the new areas, first into territorial status, and then into statehood as an equal partner with the original members, when sufficient population had been attained. Having come through the revolution, Congress had no desire to play the part of the mother country in a replay of the colonial drama.

Although Congress was certainly hoping to raise revenue through these policies, they none the less constituted acts of nation building that both reflected and helped to define national identity. It was crucial that settlers entered new territories under national rather than state aegis, so that the
standardised land system operated to reinforce their sense of American nationality, as opposed to attachment to one of the states. Had these territories been the object of competing state claims (as they had been in colonial times), the effect of migration on the sense of identity might have been quite different. Land policies were articulated as representations of the values thought to be implicit in the revolution itself. And in typical American fashion, these values offered opportunities both to individual family farmers and to huge, ambitious land companies hoping to make a profit from real estate development. From this early point, in other words, American nation building was a commercial proposition.

AMERICAN NATIONHOOD AND FREE LABOUR

The Northwest Ordinance proclaimed, 'There shall be neither slavery nor involuntary servitude in said territory', a proactive measure of prime significance for the economic development of that region. Abolition of slavery in the northern states was clearly a consequence of the revolution, a response to the glaring inconsistency between the rhetoric of freedom and equality on the one hand, and the fact of human bondage on the other. These state-level measures, begun in the 1780s and completed just after the turn of the century, are not normally identified as important economic policy shifts, because they are seen mainly as confirming slavery's marginal significance in these states. Such a dismissal is misleading, not only because slave-owners in states like New York and New Jersey fought long and hard to maintain their property rights in slaves, but because opening the north-west territory to the importation of slaves would have changed the course of history in dramatic fashion. The post-war emancipations set the ideological context for the Ordinance, which in turn set the terms for territorial settlement.

Despite the proscription in the Ordinance, there were slaves and strong pro-slavery forces in Ohio, Indiana and Illinois, and the issue was not definitively settled until the 1820s. Only the need to gain Congressional approval for statehood led the legislature of the Indiana territory in 1810 to prohibit the introduction of new slaves or servants. The Illinois territory, which split off from Indiana over the slavery issue, had a proslavery majority as late as 1818; again, only the threat of Congressional rejection deterred Illinois from attempting to enter the Union as a slave state. From the viewpoint of distant would-be land developers, property rights in labour always seemed to be the quickest and surest way to develop empty lands. These people undoubtedly underestimated the speed and enthusiasm with which free family farmers would soon fill up the territory (with dramatic effects on
land values); but if the pro-slavery forces had had their way politically, that
free farm settlement might never have occurred, and the entire pace and
pattern of regional development would have been unrecognisably different.

Several things are notable about the exclusion of slavery from the northern
territories. The first is that it would not have happened in the absence
of political independence. The British anti-slavery movement barely exis
ted prior to the American Revolution, achieving its first goal of ending
the African slave trade only in 1807 – the same year in which the US ended
the African trade, with the acquiescence (indeed with active support in some
cases) of the slave South, by then aware of the potential for profit in appreci
ating slave values. Abolition of slavery in the British empire had to wait
until 1833. Thus the hypothetical settlement of the American north-west by
slave-holding planters might really have occurred had the revolution been
avoided.

Second, articulation of the basis for excluding slavery was an aspect of
nation-building, which had broad consequences for defining the concept
of freedom and the operation of labour markets. Throughout the northern
states and territories, slaveholders tried to evade the law by claiming that
their servants had voluntarily signed long-term labour contracts. The result
was to create a powerful legal presumption against the validity of such
contracts, as a denial of fundamental human rights. One of the legal disputes
arising in the new state of Indiana (the case of Mary Clark, a woman of
colour) led to the following sweeping judicial statement in 1821:

It may be laid down as a general rule, that neither the common law nor the Statutes
in force in this State recognize the coercion of a specific performance of contracts... Such a performance, if enforced by the law, would produce a state of servitude as
degrading and demoralizing in its consequences, as a state of absolute slavery; and
if enforced under a government like ours, which acknowledges a personal equality,
it would be productive of a state of feeling more discordant and irritating than
slavery itself."

The statement defines "a government like ours" in what are recognisably
nationalist terms, yet in such a way that the slave South does not fit in. Thus,
a corollary of American nation-building was that the slave South came to
seem like an alien land to northerners, notwithstanding its participation
in the revolution and in the democratising trends of the early nineteenth
century.

Once the slavery issue was settled, the northern states threw their en
ergies into projects oriented towards raising the value of land: by improv
ing transportation, opening markets, building towns and recruiting new
settlers. Growth as real estate development is often seen as the typically American style, but it only makes economic sense in a region where there are well-established fee-simple property rights in land, and property rights in labour are not permitted. Northern abolition thus helped to channel economic activity in these regions.

THE US CONSTITUTION AND THE CAPITAL MARKETS

To explain the timing and magnitude of economic change, however, we have to return to the national constitutional situation as it stood in 1787. The convention that met in Philadelphia in that year was emphatically an exercise in nation building, perhaps the canonical case. Officially the delegates had no authority to undertake such a sweeping project in institutional design, having been appointed by Congress only to recommend possible revisions to the Articles of Confederation. But the assembled group quickly agreed that more drastic alterations were required, in effect a new national beginning. Among the delegates, there was near consensus on the federal government’s need for an independent revenue source and clearer authority in matters pertaining to foreign trade, the army and the territories. It is far from clear that this consensus was broadly shared among the politically active population in the member states – as the bitter struggle over ratification confirmed. Thus these events count as a true turning point, without which subsequent history (economics included) would have been very different.

To understand the basis for the ratification debates, one must appreciate the context of the 1780s. Although it is mainly studied historically as an example of inflationary war finance, the revolution itself had significant effects on economic activity. Indeed, the war may be viewed as the first step in the long turn inward towards the opportunities of the domestic economy, as booming markets for farm produce generated new interest in inland transportation. The end of the war disrupted this new internal trade, but without restoring access to British imperial markets. The resulting distress caused considerable political turbulence, leading to demands for the remedy with which the colonial legislatures were long familiar – unbacked paper money as a form of debt relief. Seven states pursued this course in the 1780s, striking terror in the hearts of domestic creditors. Among the primary goals of many at the convention was thus not just to empower the federal government, but to disempower the states from paper money and other forms of mischief. Benjamin Rush wrote in 1788: ‘If the new Constitution held forth no other advantages [than] that [of] a future exemption from
paper money and tender laws, it would be eno' to recommend it to most men."

It is significant, therefore, that the constitution gave the federal government exclusive authority over money, over foreign and inter-state commerce, and over the territories (including relations with the Native Americans). These powers, and their exclusivity, were given credibility by the simultaneous creation of a federal executive branch and an independent judiciary, to enforce the constitution as the 'Supreme Law of the land... anything in the Constitution or laws of any State to the contrary notwithstanding' (Art. VI, § 2). The states retained extensive powers in such areas as banking, transportation, taxation and education. But American nation building was simultaneously a creation of sovereign powers combined and an abrogation of major aspects of sovereignty by the states; as much a chapter in nation-state restraint as in nation building.

In one important respect, however, the history of the USA was not fundamentally different from that of European nations, in that financial policies were dictated by the fiscal needs of governments. On this count the constitution of 1789 left much unsaid, giving the federal government access to tax revenue only implicitly through its control over customs. Of equal importance in defining the US nation-state was the federalist programme enacted during George Washington's first term of office (1789-92), under the leadership of Secretary of the Treasury Alexander Hamilton. Hamilton's reports on the public credit, on the Bank of the United States and on manufactures are classics of US political economy and national definition. With the exception of the report on manufactures, virtually the entire plan was backed by the president and promptly voted into law by Congress. The immediate results included a sweeping assumption of debt by the federal government ('funding at par' the long-depreciated war debts of the states), launching of a banking system based on liabilities convertible into a specie base, and a dramatic improvement in the status of US federal government debt in the capital markets of Europe. The long-term effects are more subject to interpretation, but potentially include US territorial expansion, creation of a national securities market, and facilitating the large inflow of foreign capital into the country during the first half of the nineteenth century.

The debts of the Confederation Congress were valued at 15 to 25 cents on the dollar in 1789. When Hamilton's new US securities first appeared in late 1790, they were valued at 30 to 70 cents on the dollar. By August of 1791, they were selling above par in London and Amsterdam. 'Our public credit', wrote Washington, 'stands on that ground, which three years ago
it would have been considered as a species of madness to have foretold.' Ten years later, when President Thomas Jefferson offered France US $7.5 million for the Island of New Orleans – an essential outlet for the products of western farms – Napoleon countered with a proposal to sell the entire Louisiana territory for $15 million. Of this amount, $11.25 million took the form of new federal securities, for which the French found ready buyers in Holland. The transaction doubled the country’s land area, and would have been inconceivable under the Articles of Confederation.

Research by Richard Sylla and collaborators shows that trading in US securities was active in American cities far earlier than previously appreciated, in markets displaying depth and geographic integration even in the 1790s. As in the ‘financial revolution’ of eighteenth-century Europe, prudent management of government debt contributed to the institutional evolution of the capital market, widening opportunities for public and private agents to raise funds for ambitious new projects. Among the first to respond were state-chartered banks, whose securities were second only to those of the government as objects of investment and trade. The constitution deprived the states of the power to issue money, but not the power to charter banks, an indirect means of expanding the money supply (through note issue) and gaining revenue (or credit on favourable terms) for the state. The number of banks increased from 3 in 1790 to 28 in 1800, 102 in 1810, 327 in 1820, and 584 by 1835. Thus, from the near-absence of financial institutions in the 1780s, the USA developed a sophisticated network of banks and securities trading by the early nineteenth century. Hamilton’s nation-building measures were essential to this development; but so too were the (constrained) efforts by the states to promote economic activity and gain revenue.

Similar complementarities between private and state motives pervaded the active state developmental programmes that were popular between 1815 and the 1840s, chiefly in the form of state-sponsored or subsidised improvements in transportation. The underlying constituencies for these programmes were coalitions of urban merchants competing for trade, and landowners hoping for capital gains on their property. Geographically, these interests did not coincide very closely with state boundaries. But the states were the political and institutional vehicles, because their taxing powers allowed them to offer the ‘loan of the state’s credit’ to investors. Beginning with New York’s spectacular success with the Erie Canal (begun in 1817 and completed in 1825), state governments committed some $300 million to internal improvements by 1850, in cash or credit. The great bulk of the funding was supplied by overseas investors, who purchased bonds from state-owned or (more commonly) state-subsidised canal companies.
Although the federal government played a little active role in promoting development during this phase of history, there were clear historical links between this inflow of foreign capital and the structuring of US national institutions in the 1780s and 1790s. Indeed, the peculiarities of American federalism led to some consternation among foreign investors in the 1840s, when nine of the states defaulted on debt payments (including some repudiations), and the federal government was unwilling to take responsibility for these obligations. But by then the US ‘transportation revolution’ was well underway, and this episode did no long-term damage to American credit in world markets.

The Rise of American Industry

Hamilton proposed to fill out the nation-building agenda with an active federal programme to promote American manufacturing; but this plan had little appeal to the nation in the 1790s. If this negative political view had prevailed for the next century, the USA would still have experienced prosperity and economic growth. Indeed, the acceleration of productivity growth between 1790 and 1840 was primarily an agricultural phenomenon, necessarily so because of the predominance of farming in the national economy at that time. But in the absence of a dynamic manufacturing sector, the USA would not have become the world’s leading economic nation. And the historical record suggests that US industry would not have been launched on its road to modernity in the absence of national unity and government encouragement; and these policies in turn required the constitutional structure of 1789.

Individual states might, of course, have pursued industrial protection policies on their own. Some of them did: in the 1780s, tariffs on foreign goods were enacted by New York, Massachusetts, Pennsylvania, Rhode Island and New Hampshire. But these were not fully effective for either revenue or protective purposes, because the tariffs were not uniform among the states. Thus, state-level duties on ‘foreign’ goods inevitably generated pressure for taxes on goods coming in from other states, as some alleged was happening in that decade. Tariff policies by individual states would have been a different economic animal indeed. The USA escaped the adverse consequences of protectionism chiefly because of the large size of the national domestic market. Again, we see the contribution of the constitution in restraining state actions as much as in enabling federal action.

How then did the country move from the indifference of the 1790s to a policy of industrial protection in 1816? In briefest summary, through a
path-dependent course of events in which nationhood was crucial. When the European wars escalated after 1793, American ports and shippers were able to prosper from the nation's neutrality, by supplying shipping services and transshipments of goods to both sides. Until 1807, the north-eastern seaboard enjoyed a unique period of mercantile prosperity, a stimulus to urban and financial development, but certainly not to US manufacturing activity. This open-economy world changed virtually overnight into a closed-economy antithesis, with the imposition of Jefferson's embargo in December 1807. To make a short story even shorter, one may regard the embargo–non-intercourse–wartime period of 1808–15 as almost a textbook experiment in the sudden shut-off of trade with the outside world. For the seaboard shippers, the results were devastating. But alongside their suffering, the years of isolation stimulated a remarkable expansion of internal trade, including rapid growth of manufactures. The most dramatic example was cotton textiles, but hothouse factories also sprang up in such activities as metals and machinery, iron and chemicals. In Philadelphia, the carpet and glass industries enjoyed an unprecedented boom.18

Of course, most of these wartime operations were flimsy and inefficient, and quickly closed with the return of British imports in 1816. But not all failed, and not without a struggle to survive through political as well as economic means. Out of the turbulence came the tariff of 1816, traditionally identified as the nation's first protective tariff. Even the staunch free trader Frank Taussig allowed that this duty might have been justifiable as a temporary measure, in light of the severe problems of post-war adjustment.19 Justifiable or not, under this tariff and its successors, the US cotton textile industry enjoyed almost complete protection against cheap Indian imports, and a substantial competitive advantage in the domestic market relative to Great Britain, the undeniable world leader in that industry. Further, not all of the adjustments were political. Some lasting technological innovations date from precisely this transition period, such as the 'life-saving' development of the power loom by Francis Cabot Lowell and Paul Moody.20

To what extent was the tariff essential to the success of US industry in the nineteenth century? We do not know the answer to this question with any precision. Economic historians have tended to focus on the retrospective policy question of whether tariff protection could be justified by standard criteria, such as learning effects and externalities. Studies of late nineteenth-century protection tend to reach negative conclusions, arguing that US tariffs by that point were too high and indiscriminate to have had net benefits for the economy. For the antebellum period, only protection of cotton textiles has been carefully examined. For that case, the most careful
study finds, not that protection was necessarily justifiable, but that American labour costs were such that the vast majority of firms in the industry required protection for survival.\textsuperscript{21} This finding does not necessarily imply, however, that protection had only adverse effects on US industrial development. By allowing an expansion of the \textit{scale} of US cloth-making, tariff protection made possible the rise of specialised producers of textile \textit{machinery}; the textile machinery industry, in turn, was one of the main early loci of the machine-tools industry that propelled American industry into world-class status by the end of the century. As early as the 1830s, machine shops that were initially attached to textile factories began to diversify their product lines into steam engines, turbines, locomotives and other machine tools. Through a process that Rosenberg calls ‘technological convergence’, a common national body of metalworking and mechanical knowledge came to be applied to a diverse range of industries.

Would all this have happened, if it had not been for the embargo of 1807 and the tariff of 1816? Intricate counterfactuals such as this are inherently unanswerable, at least not at the level of rigour to which quantitative economic historians now aspire. The precise effects of tariff legislation are perhaps less essential than an appreciation of the positive interactions that were at work, between nation building in the broad sense, political support for economic development, and the evolution of an indigenous national technological community. Although this was a decentralised process, it amounted to a process of collective learning, because American engineers and mechanics were engaged in adapting what were originally European innovations to an American environment that was distinctive in its resource base, in its conditions of factor supply, and in the scale and character of its product markets.\textsuperscript{22}

\textbf{Conclusion}

This chapter has endeavoured to show that these characteristic American patterns of economic development would not have been possible in the absence of the institutional arrangements that emerged from the 1780s and 1790s. And these in turn would not have occurred, at least not at that time and in that way, if there had not been an American Revolution in 1776. The remaining task is to compare this US record with that of other broadly comparable nations in Europe and the Americas.

One of these comparisons should be with the divergent path of the American South. The slave South was a full participant in the revolution, in the design of the constitution, and even in the acceleration of economic growth
in the first half of the nineteenth century. But essential features of the American nation-building experience were not shared by the South. Although the southern states also pursued development schemes, the region lagged in population growth, infrastructure investment, territorial settlement, urban development and education — in short, in most of the components of what we now take to constitute ‘economic development’. In essence, the failure was in nation building. If the slave states had separated in 1789 and formed a separate nation — as they tried to do unsuccessfully in 1861 — that entity might have been better able to define and implement a national agenda more suited to a slave-holding republic. The deeper problem, however, was that the slave-based economy did not generate the same symbiosis between profit seeking and nation building that formed the core of the American experience for the rest of the country.

NOTES


2. For the most recent review of national income statistics for this period, see Paul A. David, ‘Real Income and Economic Welfare Growth in the Early Republic or, Another Try at Getting the American Story Straight’, Discussion Papers in Economic and Social History, 5 (Oxford, 1996).


8. In providing for new states, the Northwest Ordinance fulfilled earlier statements of Congressional intention, in the 1780 Resolution on Public Land and the Ordinance of 1784. The 1787 Ordinance also explicitly established fee simple ownership in the territories. See Douglass C. North and Andrew R. Rutten, ‘The Northwest Ordinance in Historical Perspective’ in David C. Klingaman


16. This proliferation of state-chartered banks was a distinct break with the colonial regime, which sharply curtailed bank creation. See Edwin J. Perkins, *American Public Finance and Financial Services 1700–1835* (Columbus, Ohio, 1994), pp. 41, 188, 361.


