On the Nature of Limits in the Concept of Limited Government

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Google “limited government” and you get a wide and wild variety of definitions. “Enumerated powers” and “checks and balances” are two phrases that appear often, as is the notion that limited government depends on a constitution that spells out the limits. Written constitutions, however, are often not worth the paper they are printed on. What makes the limits in a constitution work? Or perhaps a better question is where do limits on government actually come from and what social, political, and economic dynamics sustain the limits? That is the question this paper attempts to answer, both in a general framework and in the specific historical context of the United States in the 19th century.

Limits on government are, of course, constraints on what governments can do. In this paper, however, governments are placed in a larger social and economic context, and limits are conceived more broadly, in the spirit of Madison’s Federalist 51: “But what is government itself, but the greatest of all reflections on human nature? If men were angels, no government would be necessary. If angels were to govern men, neither external nor internal controls on government would be necessary.” Governments are a reflection of human nature, but human nature as expressed in the concrete lives lived in specific societies and reflected in all the dimensions of those societies. The key idea is that politics and economics are always connected in every society. Building on that insight, the relationship of the government and political system to the economy is framed and a new and broader conception of the “limits” on government can be articulated. In the framework, the constitutional or institutional, political limits on how the government interacts with the economy and the larger society directly affects how the economy and the larger society constrain and limit the government. The core idea is that effective limits on governments can never be based solely on constitutional provisions

limiting the functions that governments perform and the rights of citizens that governments must rccognize and protect, the limits must be enforced by the dynamic relationships of the economy and society with their governments.

I attempt to show that in most societies, historically and in the modern world, effective limits on government are not credible because of the nature of the economy and social environment in which governments function. As a result, governments often do things that violate normal conventions about the appropriate behavior of governments. Even in well established democracies with effective limits on government, we recognize that in extreme and emergency situations it is appropriate for the government to exceed or ignore the established limits, and hope that when the crisis has passes the limits are restored. In most societies, crises that produce the need for governments to exceed their limits occur with much greater frequency than in modern developed democracies. In some cases the government reacts to a crisis, in others government itself causes the crisis, in most the causes are mixed. Our question is whether we can look deeply enough into the dynamics of how societies, their governments, and their economies actually work to understand how institutions can arise that enable effective and credible limits on governments? Can we see how the economy itself, or other features of the society, could serve as effective limits on government?

No pure theoretical standard of effective limits on governments is proposed or adopted. Instead a historical working definition of limits is developed corresponding to what the United States seems to have achieved by the late 19th century. The United States fumbled and bumbled around with its institutions at the national and state level before it figured out how to effectively limit government in the sense considered in this paper. Americans did not figure out how to limit

governments in the first state constitutions or in the second national constitution of 1787. So the usual history of limited government in the United States as embedded in checks and balances, mixed government, the extended republic and the like is challenged and in important ways refuted. In the previous version of the paper I gave a much more detailed history of early 19th century America do document the historical claims, in this version I will focus on one historical case, that of Indiana.

The conceptual part of the paper follows this introduction. It uses the framework developed in North, Wallis, and Weingast (2009) to lay out how economics and politics interact in most, if not all, human societies up to 1800. In these societies the political system manipulates economic privileges to provide the material incentives that hold political coalitions together. This is called the "logic of the natural state:" in natural state societies the political process systematically manipulates the economy to support social order. In the context of American history I have earlier called the logic of natural states "systematic corruption" (Wallis, 2006). In late 18th and early 19th century Americans talked about corruption all the time. They usually meant systematic corruption, a concept foreign to our modern use of the term corruption. Americans were really worried about systematic corruption, and they took multiple steps to eliminate it. Specifically, they were worried that political manipulation of the economy would undermine a republican democracy. Eventually they hit on how to eliminate systematic corruption in the 1840s. I continue to use the term systematic corruption in this paper, but more sparingly. The connotations of the term corruption for modern readers initially overwhelm the 18th and early 19th century sense of the term. Instead I use the term logic of the natural state or,

simple, the natural state.[1]

The problem with natural states when compared to modern, developed, open access societies, is that they are governed by coalitions of powerful organizations and individuals whose relationships are inherently personal and are inherently fragile. As a result, their political and economic arrangements often need to be adjusted to reflect changing circumstances. Sometimes those changes produce dramatically bad outcomes for the society. These include civil war; coups; regime change through violence or other extra-constitutional means; government default or financial collapse with the attendant dislocations of financial markets; confiscation or expropriation of significant groups in the population, sometimes in the form of nationalization, sometimes in the form of genocide or ethnic cleansing; and deliberate political manipulation of the economy for political purposes. These are really bad outcomes for a society. They are also outcomes in which governments often overstep their limits.

These are much worse than the bad outcomes that we normally talk about in economics. Things like rent seeking of many types, political redistribution of resources through taxing and spending, or price controls and other market manipulations. These are bad outcomes, but not really bad outcomes.[2] Countries that experience really bad outcomes often go backwards economically, they shrink rather than grow. Countries that experience bad outcomes may grow more slowly, although there is intense debate about that. Most economic analysis is about bad outcomes, not about really bad outcomes. Really bad outcomes are the product of processes

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[1] I am still struggling with the terms here.

[2] I am not happy with the terms “bad”and “really bad” outcomes, but don’t have a better set yet.

economists usually do not consider, they are effectively exogenous.

The conceptual section establishes why a society in which the government manipulate the economy for political purposes will be more fragile and subject to really bad periodic crises of both the economy and of the political system. When societies decide to limit the ability of their governments to manipulate economic and other privileges on some dimensions, the fragility of the social system is reduced. The reasons for increased robustness to shocks and increased stability are conceptually clear. It isn't that open access societies are subject to fewer or milder shocks, it is that they are able to adjust to them more readily, what North (1990) called adaptive efficiency. In the simplest terms, once economic interests are not being manipulated by the political process, economic interest are in a position to discipline the political process. Economic interests acquire strong incentives to resist changing the basic institutional rules governing economic relationships. They defend impersonal rules: rules that treat everyone the same. This is true even when each individual or organization could benefit in a narrow sense by having the rules or rule enforcement changed in their favor. The same is also true for other social interests like religion, municipal government, and education. In the United States these limits on the ability of governments, specifically state legislatures, to manipulate economic and other interests are embodied in "general laws:" laws that must be applied equally to everyone, or to all citizens. These are not usually thought of as limits on government, because they do not limit what the government can do, but general laws definitely limit *how* governments do things. Why these changes take place are complicated. I follow the process in the United States, using Indiana as the specific case.

Whether the conceptual framework is correct or not remains a matter of debate and

contention. Much of the paper maintains the assumption that the framework is true in order to explore what Americans were doing and thinking at specific points in time, with particular attention to what they believed would happen if they made certain choices. Although there were glimmerings of insight, no one understood the conceptual framework, that it, no one saw how an open access society would work and pressed for impersonal rules in order to implement a new social order that would promote economic growth and development. The founding generations worried about corruption, tyranny, and slavery (in their terms) and they implemented a series of institutional changes to protect their political and civil liberties and freedoms. We can show why they did what they did, why they believed what they did would work. And we can show that it didn't work the way they expected, indeed, that some really bad outcomes occurred between 1790 and 1861. As a result, when the states began limiting their legislatures to pass only general laws that created impersonal rules for wide areas of social life, they were not doing it to promote economic growth and development but to protect their liberties and freedoms within the democratic republics they initially established. While this is not a formal statistical identification strategy, it nonetheless shows that the institutional changes that occurred in the 1840s were, in the argot, "exogenous" in the sense that the changes that ensued were not anticipated. The movement to general laws was not the result of economic growth nor was it intended to produce economic growth. The subsequent effect of institutional changes on growth, through the reduction of really bad outcomes, was truly an exogenous effect.

The later empirical sections of the paper show that these changes took place, that they mattered in terms of really bad outcomes, and that the general law requirements were enforced through a combination of the legal system and through economic, political, and social dynamics.

The United States created effective limited government in the 1840s and thereafter, not in the 1790s.

2. A Conceptual Framework

Written constitutional arrangements that limit government have become part of the modern political lexicon. In the 18th century, a society's constitution was more often described in organic terms. The body politic and the constitution of society could be described as robust and healthy or weak and sickly. Constitutions were the bones, muscles, tendons, and sinew that held society together. For the last five millennia societies around the world that were not organized as hunter-gatherers, exhibit a characteristic constitutional form in this traditional sense. A relatively small elite population enjoys control over physical and human resources, land and people, as well as control over cultural resources like religion and ritual. One way to characterize the constitutions of these societies is that a small group of relatively homogenous elites with more or less common interests set up rules and organizations to enable society to function on a higher scale (i.e bigger and with more specialization). Their purpose is to further the interests of elites. Better coordination between individuals and organizations produces economic gains through specialization and division of labor, ala Smith, and elites claim the residual increase. Over the long term gains in income tend to result in larger populations rather than higher per capita incomes. Evidence for such societies seems overwhelming in the archeological and anthropological record (Flannery and Marcus, 2012). Marx classically formulated a theory of history and change around the concept of classes and the struggle between elites and masses. Acemolgu and Robinson (2006 and 2012) have the most recent, influential view of an elite dominated society.

An alternative way to think about the constitutional structure of these societies was put forward by Doug North, Barry Weingast, and myself in our 2009 book, *Violence and Social Orders* (hereafter NWW). Rather than thinking of elites as a relatively homogenous group with common interests, we saw the fundamental problem of building a larger society as enabling a larger number of powerful individuals and organizations, all of whom potentially had the ability to organize and use violence against each other, to come to agreements between themselves that they could credibly believe would be honored. In this way of thinking, elites all have different interests and are in competition with each other, a kind of Federalist #10 world. The biggest threats to elites are other elites, not the masses. The question then becomes: how do elites reach credible agreements not to use violence against each other, particularly in light of a human history in which intra-elite violence is perhaps the most predominant feature of the historical record?

The conceptual framework developed by NWW takes intra-elite conflict as the starting point for a theory of how societies work and how they are constituted. The simple thought experiment involves two powerful members of different groups trying to reach an agreement between themselves to coordinate, which necessarily involves an agreement over the conditions in which they will not fight each other. Such agreements are difficult to reach. Neither elite can disarm, for the other will then be able to conquer him. If both elites remain organized for violence, how can they agree? The solution NWW suggest is for the two elites to recognize each other's "rights" to the land, labor, and resources they each control. They agree on other arrangements as well, perhaps trade and territory. How can such an agreement be credible? Each elite can see that the rents to other elite receives from his control of his resources will be

reduced if fighting breaks out. Each elite is the residual claimant in his territory and bears the costs of reductions in wealth and resources that result from violent conflict. Each elite can see that there is a range of circumstances, perhaps a narrow range, in which the other elite will find it in their interest not to fight and uphold the agreement.

NWW call this the "logic of the natural state."[3] "Natural" state because the constitutional pattern in which elite political agreements manipulate economic arrangements in order to coordinate elite political coalitions, appears as the dominant pattern throughout the recorded human history of the last five millennia. As natural states grow in size, they systematically create rents for elites that attempt to insure that elite "factions" stay on the same page and are willing to continue to coordinate. These agreements are systematic in the sense that they are deliberate, even though the agreements are fraught with unintended consequences. These intra-elite agreements are also inherently fragile. When one elite group sees that its interest may be served from defecting from the agreement, given the risks involved in defecting, agreements fall apart. Human history is full of elite agreements that do not last, some end in renegotiation, others in war or civil war.

These societies all have constitutions in the traditional sense and they show common features across time and space, with of course infinite variations on the common features. First, elites share some common interest in greater coordination. To the extent that coordination and stability provide increased material output, and elites are the residual claimants in societies that grow and shrink with regularity, they have a common interest in growing. Those interests rarely

[3]The logic is laid out in detail in NWW. The internal logic is worked out more thoroughly in Wallis (2011) and also in North, Wallis, Webb, and Weingast (2013).

override other interests, however. Specifically, growth requires stability, a relative absence of violence, so growth is not a more powerful interest than stability. Individual groups often find it in their interest to increase the size of the piece of the pie they receive at the cost of making the pie smaller, at the cost of shrinking rather than growing (North, 1981, "The Neoclassical Theory of the State.")

Second, as these societies develop more sophisticated forms of organization, they limit the ability to form organizations to elites (or the other way around causally, only people who are able to exercise influence through an organized interest are elites). Limiting the ability to form organizations creates rents for the organizations that do exist. The rents from organizations provide the glue that holds together elite agreements and coalitions.[4] Third, as these societies develop more sophisticated organizations, they develop more sophisticated rules governing behavior within and between organizations. The shared interest in promoting stability and the market give elites incentives to create credible rules that enable exchange and other relationships over a wider geographic and demographic scale. At the same time, the rules that can be supported by the social dynamics of the natural state are rarely capable of applying equally to all people. Rules, and importantly the enforcement of rules, is typically biased in favor of more powerful elites. Indeed, how the rules apply and are enforced may make fine distinctions between elites, not just between elites and masses. The kind of rules natural states can credibly create and enforce, therefore, are "identity rules:" rules whose form and enforcement depend on

[4]NWW contrast natural states that limit access to organizations to "open access" societies where anyone can form an organization that the larger society will support.

the social identity of the individuals involved.[5]

Language can be a problem here. Societies do not structure agreements or rules, individuals do. Societies in which individuals are capable of reaching credible agreements that more (or less) limit violence and rules that enhance (or inhibit) exchange over a wider geographic and demographic populations well tend to do better (or worse) economically than societies that cannot support such agreements and rules. If institution are defined as agreed upon rules (Wallis, 2017), then the set of agreements between elites form an important element of the institutional structure of the society. Constitutionally, these institutions govern many things. Centrally, however, to the dynamics of society the institutions influence the interaction of the political system and the economic system, of political influence and economic privilege, of political and economic power. I hesitate to say the institutions "govern" the dynamic interaction between economics and politics, because the interactions are so often ungovernable and go off the rails. That instability, however, is an inherent part of the constitutional and institutional structure of these societies.

To see why these societies have such a problem with elite agreements breaking down go back to the simple logic of the natural state. The self-enforcing nature of simple elite agreements depend on mutually reinforcing rent creating arrangements. There are no third parties available to enforce these agreements, they must be incentive compatible to be credible. The agreements do no universally apply to all situations, they are only credible within a narrow range of circumstances and the world is always in flux. The ability to reach some agreements will,

[5]These ideas are developed over a range of papers and books Wallis 2005, 2006, and particularly 2011; NWW 2009; North, Webb, Wallis, and Weingast 2013; Lamoreaux and Wallis 2017.

nonetheless, improve the lot of both the elites and the masses, to the extent that the masses enjoy lower levels of violence if not an improved material standard of living.[6] But instability in these societies results from much more than the breakdown in simple elite agreements. The three points raised above matter enormously.

The constitutions of natural states are rarely written documents. They concern many areas where economics and politics interact. Literally who gets what may be an important element of a constitution in a fragile crisis situation, as in post-independence Latin America where land was distributed and redistributed among competing elites in order to secure elite coalitions (Lynch, 1986; Adelman 1999) Redistribution of land was an important element in holding together the coalition of military elites after the Norman conquest in England. All land holdings initially reverted to the king in the years after the conquest, until elite interests forced a change in the constitution and allowed noble landowners to pass their property to their heirs (NWW, chapter 4). Natural state constitutions are particularistic, and often they include orderings of who dominates who. Elites have a interest in promoting growth and stability, point one above, and they are willing to support elite organizations, including governments, capable of creating and enforcing rules, point two. But the rules they create and enforce do not apply equally to everyone, point three. To make this simpler to see, we can make the assumption that when a more powerful elite and a less powerful elite end up in a dispute that must go before some kind of an adjudication process, legal court, manor court, etc. then the most powerful elite will always win. Contracts can be enforced on less powerful elites, but not against more

[6]See Burkett, Steckel, and Wallis (2017) for a formal model of organizations, violence, social scale, and standards of living consistent with the New World archeological record.

powerful elites.

These features of natural states and identity rules almost inevitably lead to pervasive instability. Suppose a wide elite coalition agrees to set of arrangements that include some elites forming governments to adjudicate the agreements. The arrangements work, they produce stability and some measure of growth. Growth itself causes problems, however, because growth is likely to be uneven. Some elites find themselves in a stronger position, other elites in a weaker position. To the extent that everyone is willing to maintain their agreed upon relationship, things are fine. Suppose a shock weakens the power of some elites. Agreements enforced by rules with those elites may now become unenforceable (because a weaker elite became the stronger elite) or a previously unenforceable agreement is now enforceable (because a stronger elite became weaker). Economic arrangements supported by the rules are no longer as certain. As a result, political arrangements are less certain as well because the credibility of political arrangements depends on the distribution of rents. The economy shrinks as a result, because some exchanges are no longer entered into given the higher uncertainty, and Smithian shrinking results. The shrinking is not symmetric either, and again agreements maybe out of line with realities. Suppose some group of now stronger elites decides to press their advantage, or a group of weakening elites decides to move against other elites while they are still strong. In that case violence can break out at a low level, and if not resolved can grow more intense. More shrinking occurs as intra-elite relationships across elite groups becomes increasingly problematic.

Whether the situation results in a full scale civil war or not, the short run solution provided by the logic of the natural state is to reallocate rents amongst elites to provide for short

term stability. That is a short run solution that does not promote growth in the long run. These are constitutional arrangements where the polity systematically manipulates economic privileges to stabilize elite coalitions that sustain a political agreement. Uncertainty in either the economy or the polity will translate into uncertainty in the other. These are inherently fragile social orders, with a real potential for violence.

Column A in Table 1 lists the really bad outcomes that plague natural states.[7] These are associated with severe instability or breakdowns in elite coalitions. To be clear, elite factions in the government may be the cause of the crises, they may be the victims of the crises, or some combination of cause and effect. Not all elites are in power in any specific government, nor are they all represented. Really bad outcomes may come in anticipation of a crisis and attempts to rebalance rents within the elites. Really bad outcomes may be the crisis. Really bad outcomes may be the result of a crisis as elite coalitions attempt to reform and reach new agreements. Regardless of the cause, these crisis are all situations in which the limits on government have fallen away and ceased to be effective.

Column B in Table 1 lists bad outcomes that occur in natural states and in open access orders (developed societies). These are not associated with severe breakdowns, they are just things that governments can do that may not be best for economic growth and development or may infringe on personal and civil liberties.

As I will talk about in a later section, the founding fathers in the United States were worried about the perils of natural states. As Madison began Federalist #10, "Among the

[7] Barry Weingast suggested this table and drawing the distinction between really bad outcomes and bad outcomes.

numerous advantages promised by a well constructed Union, none deserves to be more accurately developed than its tendency to break and control the violence of faction." Madison, Hamilton, and Jay were not laying out a road map to a modern, open access society in the Federalist papers. They were arguing for a set of constitutional agreements that would minimize the danger of faction, civil war, and political manipulation of the economy for political purposes. Were the constitutional changes put in place in 1789 enough to move the United States from column A to column B? In a word, no. I'll present the evidence for that later in the paper.

How do we get a society that eliminates the really bad column A outcomes, but still has to live with the bad column B outcomes? NWW lay out the fundamental aspects of institutions that make a society an "open access order." What is "open" in an open access order is the ability to form an organization for almost any purpose, economic, religious, political, educational, or social and receive access to the kind of legal and social tools that enable organizations to function well. How you get from a natural state to an open access order is complicated and contingent. Each historical case is unique and I will examine Indiana in some detail later.

NWW stress the central importance of impersonal rules: rules that treat everyone the same. Open access can only be supported by impersonal rules. Open access requires that the rules for creating and supporting organizations are the same for everyone, or at least all citizens. Many impersonal rules are not universal, they treat all citizens the same, but not everyone. When America was moving toward impersonal rules in early 19th century, women and slaves did not enjoy the same status and rights under the rules that free white males did. Impersonal rules do not guarantee or produce equality, they simply mean that the rules the government creates and enforces must apply equally to everyone, outcomes can differ widely under impersonal rules.

Why are they so important?

In most natural states, and for almost all of human history, there were no elections. Political negotiations occurred between powerful individuals who were trying to reach agreements that made them better off and limit violence. Those two objectives were often in conflict, since individual elites could see the use of violence as a way to improve their welfare. In order to reach credible agreements, the essential feature of natural states is the manipulation of economic activity to create rents that stabilize political agreements. This is the fundamental constitutional structure of a natural state.

The requirement that the government create and enforce impersonal rules for some activity means that the government cannot manipulate the economic interests on that dimension of economic life. An important example are general incorporation laws. When a state constitution requires its legislature to create a general incorporation act that enable citizens who meet impersonal criteria to obtain a corporation charter, the legislature cannot use the granting of charters to confer economic privileges and manipulate economic interests. Assume for the moment that all large business require charters and that the general law really is impersonal. Before the general act the political system could manipulate economic interests through the granting of charters, after the act it cannot. That is, while the legislature can create rents on other dimensions, it can no longer create rents and coordinate a political coalition through the granting of charters. The essential feature of the constitutional structure of a natural state – that economic privileges are in the power of the political coalition to grant or withhold – is removed on this dimension.

Equality matters, but the impact of impersonal rules on the constitutional structure of the

society does not come through more equal outcomes but an effective limit on the discretionary powers of government with an extremely important implication. The legislature is constrained from discriminating among economic interests who want charters. In a natural state economic interests are clearly part of the political agreements that are reached, but economic interests cannot discipline political agreements independently because the very roots of their economic rents lie in the political process. Under a general incorporation act, the economic organizations that form (and are allowed to continue to form and disband at will) are effectively outside the control of the political process and can, therefore, serve as an independent check on the political system. NWW called this the "theory of the double balance:" only a competitive economy can discipline a political system in a way that sustains political competition. Its corollary: only a competitive political system can maintain open access economically in order to maintain a competitive economy.

Language can be a problem here too. In a natural state, politics is competitive, often violently competitive. Sustaining political agreements requires manipulation of the economy. The result is a society where neither the polity or the economy is open access. No one is free to form an economic or political organization without the coordinated support of other elites. Competitors can and do arise. Often they are crushed, but most often they arise within the context of the existing elite arrangements.[8]

Impersonal rules are not a magic elixir that can transform a society by themselves. In a

[8]Note that this does not mean that elites are born. Elites are individuals capable of wielding coordinated power, which almost always means they are embedded in organizations. Whether an elite is of noble or mean birth means little in who becomes an elite, although a step up at birth helps.

society where political competition regularly includes violence, impersonal rules are likely to be aspirational rather than effective.

First, the adoption of impersonal rules can signal that elites find it in their interest to coordinate through impersonal rules. Elite support is critical, since if a significant number of elites oppose the impersonal rules, then impersonal rules may be on the books but will not be enforced in practice. By elite support I mean explicitly that powerful elites are willing to have an impersonal rule enforced against themselves.

Second, on the dimensions of social life for which impersonal rules apply (examples will come later), the government has tied its own hands from creating and manipulating economic or socials rents. Those areas of social life are potentially able to discipline the political process. If individuals adversely affected by a government policy can organize (which is why open access to organizations is crucial) they can push back through the political process. The double balance applies directly here. The parts of the economy and society operating under impersonal rules are still governable, the rules still apply and are enforced, but the ability of the political process to manipulate them disappears and effectively makes those interests politically uncontrollable. This creates limits on government in two ways. The ability to manipulate the economy directly is limited, and the ability of economic and social interests to react against a government policy and thus limit the policy is enhanced.

Third, the political process itself under goes a constitutional transformation. At one extreme, losing in political competition in a natural state means death, literally. Intra-elite competition often involves more subtle gradations than living or dying, but the stakes of power can be extreme. In an open access system, political competition is sustained by the inability of

the political process to close off economic *and* political entry. As a result, when one party wins control of the system, it cannot prevent its opponents from reorganizing. The American historian Richard Hofstadter in his classic book *The Idea of a Party System* called this the baseball analogy. Early 19th century politicians had to learn that winning an election did not mean that you annihilated the competition. There are 162 games a season, and the losers would be back to contest elections again in the future and the winners might be the losers next time. This too imposed limits on what governments could do, because the rules a faction made today were likely to be reversed by a different faction in the future, unless the rules made applied equally to everyone.

All three points are important, but the last point drives home why the incidence of really bad political outcomes declines when a society moves to open access supported by impersonal rules. In order for one faction to gain control of the government and step over the limits requires, in effect, for that faction to win or die. Really bad outcomes occur when those kind of factional disputes get our of control. Limits on government exist in the constitutional rules and in the dynamics of how politics, economics, and the larger society play out.

All of this theorizing serves to frame a hypothesis. The limits on government imposed in the constitutions of American states and the national government between 1776 and 1790 were not sufficient to prevent really bad, column A things from happening. The constitutional agreements reached in those years guaranteed and actually delivered the institutions and outcomes we associate with good governance: secure property rights in land, clear contract rules and enforcement, rule of law, checks and balances in a form of mixed government, and significant limits on executive power. Nonetheless, those limits did not prevent really bad

outcomes.

The following section lays out the evidence on the distribution of really bad outcomes, as reflected in macro-economic performance in the modern world and historical data series (Broadberry and Wallis, 2017) to show that the patterns really exist. The next section examines what the founders were thinking about the interaction of economics and politics in the 18th century. The fifth section considers how the state of Indiana came to adopt a wide range of constitutional provision requiring general laws in its 1851 constitution. The final section shows how general laws spread throughout 19th century, and what happened to the frequency of really bad outcomes.

3. Growing and Shrinking

The framework suggests that natural state identity rule societies, where the political system manipulates the economic system to sustain political coordination, should be more unstable than societies with open access to organizations and a measure of impersonal rules. Evidence for the suggestion is provided in this section, with no implication of "testing" a hypothesis according the prevailing standards of economics. The point is to see whether the stability implication is consistent with the data. Then to see how crises affect economic performance over the long haul. What appears is that shrinking is a major impediment to growth, in more than the obvious sense. The onset of modern economic growth is not caused by economies growing faster when they grow, but shrinking less frequently and less severely when they shrink. This is based on work with Steve Broadberry (Broadberry and Wallis 2016, 2017).

A simple identity can be used to decompose the sources of long run economic performance – the change in real per capita income – into components reflecting the rate at

which an economy grows when it is growing, $g(+)$ (the growing rate), the rate at which an economy shrinks when it is shrinking, $gf(-)$ (the shrinking rate), and the frequency with which it grows or shrinks $f(+) = 1 - f(-)$ (the growing frequency = 1 - the shrinking frequency.) Thus:

$$g = \{f(+)\ g(+)\} + \{f(-)\ g(-)\} \tag{1}$$

Since the frequency of growing is equal to one minus the frequency of shrinking, equation (1) can be rewritten as:

$$g = \{[1\text{-}f(-)]\ g(+)\} + \{f(-)\ g(-)\} \tag{2}$$

which reduces the number of independent factors to three. We can use this identity to decompose long run economic performance into shrinking and growing components. The contribution of growing is the growing rate times the growing frequency compared over time periods, and the contribution of shrinking is the shrinking rate times the shrinking frequency compared over time periods.

Table 2 takes the Penn World Tables data from 1950 to 2011 and breaks down the growing and shrinking rates and frequencies by per capita income categories. We see from the third column that poor countries have not grown less rapidly than rich countries when they grow. Indeed, the average growing rate has actually been higher for poorer countries than richer countries. Similarly, we can see in the final column that the average shrinking rate has also been higher for poorer countries. However, the second column shows that the frequency of growing has been higher for countries with higher levels of per capita income. The richest countries grew in approximately 84 per cent of years, while the poorest countries grew in just 62 per cent of years. Since the frequency of shrinking is one minus the frequency of growing, the frequency of shrinking has to be higher for poorer countries: the poorest countries shrank in almost 38 per

cent of years, while the richest countries shrank in just 16 per cent of years. So poor countries have grown less frequently than rich countries; they have higher shrinking rates and shrinking frequencies.

Table 3 decomposes the data into the contribution of growing and shrinking in each of the income category. What is striking about this table is that, except for the poorest countries, all of the variation in growth rates over the sample is accounted for by variations in the contribution of shrinking, not the contribution of growing. Rich countries grow more slowly when they grow than poor countries, not faster. What accounts for the difference in rich and poor countries is the frequency and rate with which the shrink.

Tables 4, 5, and 6 present the same type of data for the Angus Maddison sample of 18 countries from 1820 to 2008 (not all countries start in 1820). Table 4 shows the growing and shrinking frequencies, Table 5 the growing and shrinking rates, and Table 6 the growing and shrinking contributions. As before it is the decline in shrinking that dominates the process of modern growth, not an increase in growing rates. Table 7 breaks the aggregate results into some of the individual countries, including the United States.

I will not provide a statistical analysis of the really bad outcomes and economic shrinking here. The evidence on wars, civil wars, and other forms of social disorder is convincing.[9] What surprised me when I first looked at this kind of data (NWW, ch. 1) was the very high shrinking rates in developing countries. These societies experience rapid shrinking, an average of about 4 percent per year in Table 2, which includes many case of mild shrinking. It also means a significant number of societies lose 10 percent or more per capita income in a year. These are

[9]For example see Collier (2007 and 2009).

societies in crisis. And those crises are often associated with breakdown in limits on governments.

4. The Founders: What were they thinking?

We now turn to the United States from 1770 to 1860, where the hypothesis is that the constitutional and institutional arrangements adopted in the first constitutions were insufficient to prevent bad things from happening, but changes in the 1840s did do so. The argument involves considerable nuance, since what the founders thought they were doing was very important to explaining what they did. But what they thought they were going to accomplish is not necessarily what happened. The founders attempted to establish a workable republic. They were extremely sensitive to the connections between politics and economics and the potential for a political faction to manipulate economic interests of others in order to further the goals of the faction, but they did very little in their first constitutions that prevented political factions from manipulating economic interests for political gain. As Hamilton immediately showed in his *Report on the Public Credit* when he argued "If all the public creditors receive their dues from one source... their interests will be the same. And having the same interests, they will unite in support of the fiscal arrangements of the government."

Let me make the structure of the argument very clear. Societies organized as natural states are inherently more fragile and unstable than societies organized as open access order with a measure of impersonal rules. This is what Durkheim would call a "social fact:" a feature of the world beyond the influence of individuals that nonetheless structure human social interaction. This has nothing to do with what people believe or their values. A society with impersonal rules and open access will perform better. It is also likely to induce changes in beliefs and values, but

the beliefs and values are not the cause of the social outcome.

There had not been any open access societies historically before 1770. Not even James Madison or Alexander Hamilton could see what an open access society would look like, much less how it would work, because there were no models. The American founders and republican thinkers in general had some very good ideas and implemented some very good institutions, but what they implemented did not bring about open access. Nonetheless, the fact that British intellectuals, and the British who eventually became Americans, were highly attuned to the dangers of political factions manipulating the economy, did not mean that they were capable of designing a constitutional/institutional system capable of eliminating really bad Column A outcomes. What it meant was that when really bad Column A outcomes started happening, they were particularly inclined to see the cause of the really bad outcomes in political manipulation of the economy. This section examines what the founders were thinking, not to glean wisdom about how to write constitutions (although there is a lot there), but to understand how Americans interpreted the causes of the really bad things that occurred in the 1840s and why the took the steps the did.

Political manipulation of economic interests did not play a prominent role in republican thinking for Machiavelli or even Harrington in 17th century Britain (although both were aware of economic interests). Concerns about mixed and balanced governed occupied center stage. But the development of the military industrial complex that resulted from 18th century Britain's ongoing conflict with France raised concerns specifically about the relationship between economics and politics. A major realignment in American history turned on Bernard Bailyn's interpretation of the causes of the American Revolution in *The Ideological Origins of the*

American Revolution (1967). In the 1760s, the revolutionaries feared that corruption of the British constitution would lead to "tyranny and slavery." They voiced their concerns loudly and clearly. The implausibility of such claims on their face seemed to later generations of historians evidence that these arguments were either propaganda or *ex post* justifications for their actions. The founding generation owned slaves as chattel property, how could they think the British were about to enslave them? What Bailyn urged was to interpret what "tyranny and slavery" actually meant to British citizens in the 18th century, both in Europe and North America, not to Americans in the late 19th and 20th century.

The literature on Republican thought is enormous, but I will boil it down to just a few sentences.[10] Much of it is about corruption, going back to Polybius in the Roman Republic, but most is not about politics corrupting economics explicitly. Whig or commonwealth thinkers in early 18th century Britain believed in mixed government, where the elements of society were represented in a balanced form through the constitution. In Britain the elements were King, Lords, and Commons. The independence of the three elements was the primary guarantee of individual liberties and protection against the corruption of the constitutional arrangements. As the 18th century unfolded, the House of Commons had gained greater control over fiscal resources in the settlement of the Glorious Revolution of 1688 and the extraordinary demands on British government finances caused by the ongoing wars with France required closer

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[10]Although Republican ideas have a long history, the modern literature begins with Robbins (1959) *Commonwealthmen*, which then emerged in two streams. One about the United States, Bailyn (1967), Wood (1969), Banning (1978) McCoy (1980), Murrin (1994), and the literature reviews by Shallope (1972 and 1982). The other tracing European origins, Pocock (1975, as well as 1987, 1993, and 1985), Skinner (1978a, 1978b, and 1998), and much much more.

coordination of the King and Parliament. The created the need for a close relationship between the King and Commons and building a legislative coalition in the Commons. Critics decried the use of economic manipulation of legislators to build and secure the coalition through the granting of economic privileges, such as ownership of stock in the Bank of England, ownership of government debt, offices in the government, royal pensions, and similar economic emoluments. The fear at the time was that the King's ministers were manipulating the economic interests of Parliament to obtain a majority. Namier and Brook (1964) show that a majority of the members of the Commons indeed had economic attachments to such a coalition of interests. Namier and Brook nonetheless maintained that the Commons remained essentially ungovernable. Tyranny and slavery – being governed by a coalition to which one had not given consent (Skinner, 1998) – would inevitably follow. The Whig theorists were not complaining about venal corruption, they were concerned that the King's unconstitutional influence in Parliament was rooted in the deliberate systematic manipulation of economic interests to gain control of the polity. Corruption was definitely the word they used in the 18th century to describe what was happening in Britain and ultimately to justify revolution and independence, but corruption was most often used in contexts and circumstances where the corruption at issue could not have been venal corruption. They were concerned that they lived in a natural state that was inherently unstable and prone to violence, as it had shown in the 17th century. They wanted to limit that from happening in their society.

The irony is that British subjects, both in England and in North America, fervently believed that the British Constitution, unwritten as it was, was the best constitution ever invented. They did not fear how it worked, they feared that it was being corrupted by events

attendant on the rise of the British military-industrial complex of the 18th century. They did not fear what was happening, they feared what would happen next. When the Americans revolted it was not because they were tyrannized or enslaved, but they feared they might be. After two decades of trying to sort out their own constitutional arrangements as an independent society, George Washington in his farewell address, identified the dangers to the American Republic as foreign entanglements, geographic expansion, and organized economic and political interests. Washington explicitly feared corporations and political parties: attempt by a faction to gain control over the entire political system through the deliberate manipulation of economic rents. He feared systematic corruption, he feared that the institutional rules put in place in the first constitutions would not be strong enough to the natural state that the United States was on an even and balanced path.

The emphasis I have placed on the interaction of economics and politics was not a major feature of republican thinking of someone like Machiavelli. The particular focus on the interaction of economics and politics was a feature of British republican thinking in the 18th century, it was a belief contingent on the specific form that republican fears took as the British government expanded its fiscal size in order to support a larger military. The fears carried over into the British colonies that became the United States. So when the Founders designed their original constitutions, they were concerned that factions would use the political system would continue to manipulate the economy to gain political control. It was not at all clear to them that elections and more representative government would suffice to control the logic of the natural state. They feared that a faction would manipulate the interests of enough people to obtain a majority and control the government. Madison argued that an extended Republic, unlike the

small republic of Montesqueiu, would prevent the coordination of a factional coalition. Lurking in the background, and at times the foreground, was the fear that inter-factional competition could lead to civil war. Madison turned out to be famously wrong. By the early 1790s the Federalist party managed to gain control of all three branches of government and Madison and Jefferson were forced, against their own ideals, to form a competing political party, the Democratic-Republicans. Perhaps the new republic was not headed in the right direction. It is certain that few Americans in 1790 could be certain the republic was on the right path. There was certainly nothing self-implementing in the new constitutions that would place effective limits on factions, political manipulation of economic interests, or the dangers of natural states.

5. Indiana

The new republic faced many challenges after 1790. One challenge was a product of the broad suffrage in many states, universal free white male suffrage in Ohio in 1803 and in all the northwestern states (Keyssar, 2000). Most voters were land owning farmers whose most important economic asset was land. Millions of acres of land in the west required better transportation and financial infrastructure in order to bring farms into the orbit of the Atlantic market economy. Those improvements would raise the value of land, a goal the new democracy could not turn away from. Equally challenging, however, was that building financial and transportation infrastructure would involve the creation and support of large economic organizations that would inevitably become the vehicles for political manipulation of the economy. These hopes and fears hung in an uneasy balance in the early 19th century (Wallis, 2005 and 2006).

This section recounts the history of Indiana's attempts to build infrastructure in a

democratic polity. Indiana history is particularly well studied and generations of graduate students and faculty at Indiana University have amassed a tremendous amount of detailed historical work.[11] As Indiana wrestled with whether it should or should not engage in internal improvement investments in the mid-1830s, the state generated a unique and extremely useful set of property tax assessments that we can use to track the economic impact of state policies. In 1836, a state with roughly 600,000 people and annual state revenues of $50,000, authorized the issue of $10,000,000 in 5% state bonds carrying an interest burden of $500,000 a year. Indiana offers the opportunity to tell a detailed economic history that quantifies the interests of individuals in different geographic areas and how those interests interacted over time as the state grappled with making an enormous infrastructure investment. Indiana got burned badly in the economic crisis that developed after 1839, caused in part by Indiana itself, and in the default of 1841. Indiana adopted some of the strongest constitutional provisions with respect to debt, corporations, internal improvement, and banks in its 1851 constitution.[12] Indiana offers a clear window into developments that were occurring throughout the Union from 1790 to 1840.

When Indiana entered the Union in 1816, its population was concentrated in a narrow band of counties along the Ohio river.[13] Indians still controlled roughly two-thirds of the state. It was not until the "New Purchase" of 1818, a treaty signed at St. Mary's Ohio, that the

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[11]The tradition goes back to Logan Esarey (1912 and 1918), Carmony (1998), and many students. I have included a partial bibliography of work on Internal Improvements in Indiana in a separate section of the references.

[12]This section is based on my paper "The Property Tax as a Coordinating Device: Indiana's Mammoth Internal Improvement System." Wallis (2003), as well as Wallis (2001) and Kim and Wallis (2005).

[13]The geography of Indiana counties is recounted in great detail in Fence and Armstrong, *Indiana Boundaries*, 1933. I have also relied on the maps in Esarey, *A History of Indiana*, 1918.

Delaware, Weas, Kickapoos, Pottawattomie, and Miami tribes agreed to cede territory and withdraw to the north side of the Wabash river, land the tribes would continue to hold until another round of cessions and treaties in the late 1820s and early 1830s. The Wabash river formed the southern portion of the boundary between Indiana and Illinois. Below Terre Haute, the river bends to the east and enters completely into Indiana (Figure 1 map). Migrants to western Indiana settled the lower stretch of the Wabash Valley in the late 1810s and 1820s. From Terre Haute, the river runs north to Lafayette, where it takes a long bend to the east, traversing the state and passing about 30 miles southwest of Fort Wayne. A short portage connects the Wabash with the Maumee river at Fort Wayne. The Maumee runs northeast, through the northwest corner of Ohio, and into Lake Erie. The proposed Wabash and Erie canal connected the Wabash with the Maumee, and held out the prospect of an all water route from the Ohio river to Lake Erie, offering cheap an reliable transportation to much of central Indiana. The Wabash and Erie was the highway along which settlers moved into the western and then northern portions of the state, even as it marked the northern boundaries of settlement until the treaty reached at Tippecanoe in October of 1832 opened the northern portion of the state to settlement. Millions of acres of land in northern Indiana were first opened for settlement in the late 1820s and early 1830s, and their value as farm land depended directly on opening the Wabash and Erie route.

The Indiana story comes in two parts. The first is how Indiana managed to come to a political agreement to build a canal system, in particular to fund the Wabash and Erie Canal. Early settlement in Indiana was in the southern tier of counties along the Ohio river, and in the Whitewater Valley in the southeastern corner of the state and the lower Wabash Valley in the

southwestern corner. The lands that became available in the 1820s and 1830s were not in these areas and, as a result, voters and taxpayers who lived in areas that were already served by water transportation and would not benefit from building the Wabash and Erie. As population moved north, the balance began to shift. Working out the sectoral compromise involved the creation of a new *ad valorem* property tax that would shift the expected burden of taxation away from the southern and valley counties to the northern counties.

The second part of the story describes how Indiana's finances came to such a perilous end in 1839 and later. The reason for the initial crisis had nothing to do with property taxes and land values, it was caused by the Morris Canal and Bank Company of New Jersey defaulting on obligations they had made to Indiana in 1837. The Morris Bank had taken five million in Indiana bonds on credit, promising to pay the state in installments of $500,000 every six months. In the summer of 1839, it became clear that the Bank would not be making the second 1839 installment, leaving the state with three and half million dollars in outstanding bonds for which they had never been paid but on which the were expected to pay interest. The state curtailed construction on the canals, land values which had risen in anticipation of the canals being completed fell, and the state found itself unable to service interest payments from property tax revenues.

Here is what happened. Advocates of the Wabash and Erie had been working for years to get the state to begin construction. In 1827, the state's congressional delegation convinced Congress to donate over 500,000 acres of land to support the canal, with a five year time limit on the grant. In 1832, the state turned over the first shovel of soil in order to not to lose the grant, but construction did not move forward. Land sales everywhere in the country began booming in

the early 1830s (Table 8, Column (1)). In 1833, Indiana taxes 4,329,000 acres of land. Between 1833 and 1836, public land sales in Indiana were 555,000, 674,000, 1,587,000, and 3,245,000 acres (column (2)). These were land sales from the public domain that the state could not tax for five years after it had been sold to a private individual.[14] In those five years more public land was sold in Indiana than was taxed in 1833. In just four years from 1833 to 1836, the potential taxable land increased by over 6 million acres, more than doubling the property tax base, and none of this land would be taxable until 1838 or later. People began to appreciate the substantial fiscal boom that would occur when that land came on line and they began to explore whether the state could borrow money against the future revenues to build canals.

Before 1836, the Indiana property tax was a flat tax levied on acres of land. There were three land quality classifications, and each classification paid a flat tax ($.80 per 100 acres of land for the best quality land, for example). The political problem with an *ad valorem* property tax was that the settled southern regions of the state rightly felt that their land would be more valuable and that an *ad valorem* tax would shift the tax burden towards those who would benefit least from the canal. In the winter of 1835, under the guidance of Governor Noble, who had initially opposed canals but had recently shifted his position to support it, the legislature passed two bills. The first authorized the Auditor of the state to make a preliminary assessment of taxable wealth throughout the state. Wealth would comprise more than land, it would also include cash, buildings, watches and other taxables. The second authorized the Canal Board to

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[14]Negotiations between Ohio and the national government in 1803 resulted in an arrangment where Ohio agreed not to tax public land for five years after it was sold to a private individual, in return for which the national government promised to build a road to Ohio. The same provisions were extended to all the states admitted up to Michigan, which did not have the five year tax moratorium in its enabling act.

lay out a series of possible routes for canals, turnpikes, and railroads. Both were to report back to the legislature's next session in the winter of 1836.[15]

There were two keys that enabled the *ad valorem* tax to coordinate the economic incentives that canal supporters wanted to effect. No matter how you feel about what Indiana did, everyone in Indiana who followed the legislative process understood that economic interests were being manipulated for political purposes. What happened in Indiana reflected the substance of systematic corruption: the political manipulation of economic interests for political purposes. Nonetheless, aside from some incompetence, there was nothing approaching large scale venal corruption in Indiana. People opposed the canal plan for many reasons, but they feared the effects of manipulating the economy would have on the political system.

First, the *ad valorem* tax included a wider tax base. The value of buildings and other wealth were higher in towns where the per acre land tax revenues were minimal. Second, potential gains from lower transportation costs because of internal improvements would be capitalized in the value of land and would be captured by the *ad valorem* tax. The legislature met before the final returns from the Auditor were available, but in his message to the Legislature on December 8, 1835, Noble reported:

> The law of last session, providing for a change in our revenue system, does not require the clerks of the several counties to report the returns of the assessors to the Auditor of State before the first day of December, consequently I am not able to present you with a view of the result of the valuations. From the best information I can obtain, however, it is believed that the disparity anticipated in the value of real estate in the old and new districts of the state, does not exist. If, upon a comparison of all the returns, this opinion shall found to be correct, there can be but little reason to question the policy or justice of

[15]Legislative sessions ran from the fall to winter, so what I am calling the Legislative Session of 1836 actually began in the fall of 1835.

a change [to *ad valorem* taxation].[16]

Unlike Noble, we can compare the returns of the State Auditor for actual taxes collected in 1834 and estimates that could be collected in 1835 under the *ad valorem* assessments to ascertain the amount of property tax that would be paid by each county under both forms of taxation. The results were surprising (they are reported by county in appendix Table A1). In both years the state expected to receive roughly $25,000 from the property tax on land, so we can compare the amount of tax paid by each county directly under both regimes. Of the 55 counties for which complete information is available in both years, 39 paid less tax under the *ad valorem* scheme than the old system.[17] *Ad valorem* taxes were less than 80 percent of per acre taxes in 28 counties, while in only 12 counties were *ad valorem* taxes more than 120 percent of per acre taxes. The figures in the table and in the analysis, focus on the value of land and improvements, excluding town lots and personal property.[18]

Noble noted the reason why so many counties paid lower taxes: "No good and satisfactory reason can be assigned why capital invested in town property, bank stock, merchandise or money at interest, should not be subject to the same rate of taxation as an equal

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[16]Riker and Thornbrough, *Noble Papers*, p. 407.

[17]Fifteen new counties were created in 1835, and these are not included in the comparison. Neither are the seven counties created between 1836 and 1844. Of the existing counties in existence in 1834, fifteen reported incomplete information in 1834 or 1835.

[18]It seems natural to include the value of town lots in the value of land, but a problem arises when we compare per acre valuations across counties. In most Indiana counties, the value of town lots per acre of land fell in the late 1830s as the amount of land subject to taxation rose. This has nothing to do with the actual value of the town lots, it is a result driven by acreage. Since the results would only be stronger if town lots were included, I have chosen to leave them out.

amount invested in land."[19] The numerical majority of land owners in Indiana were farmers and the per acre tax fell largely on their land. *Ad valorem* taxation enabled to the state to tax the value of town lands and other personal property, and shift some of the tax burden away from agricultural land. Agricultural land in the older southern counties did not experience higher taxes as a result of the shift to *ad valorem* taxation and southern opposition to the canal bill was substantially muted as a result. Indiana was not a heavily urbanized state in 1835, yet the small number of town residents bore a larger share of the tax burden under the new tax system. The adoption of the *ad valorem* tax, however, was not the result of tyranny of the majority, other forces were at work.

Indiana towns were located at breaks in the transportation network. When the state planned the system of internal improvements, it chose routes that followed existing rivers (a necessity for canals) and ran between existing population centers. To do otherwise made no sense. Although farmers along canal and railroad routes expected to benefit from lower transportation costs, the big winners from internal improvements, and therefore the most vocal promoters, were the mercantile interests in the towns located in the interstices of the system. Appendix Table A1 also includes the share of all land value in the county in town lots in 1835, and a variable "terminus" indicating whether two or more transportation lines (actual or proposed) intersected within the county. The table is sorted by the ratio of taxes paid under the per acre tax to taxes paid under the *ad valorem* tax. Counties whose taxes rose under the *ad valorem* system were much more likely to have a high share of town property in their total assessed land value, and they were more likely to be terminus counties.

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[19] Riker and Thornbrough, *Noble Papers,* p. 407.

Table 9 presents the results of bivariate regressions where the dependent variable is the ratio of *ad valorem* taxes proposed in 1835 to per acre taxes levied in 1834. The tax ratio is regressed on a dummy variable for "internal improvement" counties (all counties including a canal, railroad, or turnpike proposed in the Mammoth bill), a dummy for "terminus" counties (all counties including an intersection of two transportation routes, including the Ohio River), "town lands" (the value of town lands as a share of total land value in each county), and "latitude" (the latitude of the central point of each county). Standard errors are reported below each coefficient estimate.[20]

The results clearly indicate counties that ultimately received a canal or railroad paid higher taxes. On average, *ad valorem* taxes in internal improvement counties were 33 percent higher than in non-internal improvement counties. Terminus counties, including all of Indiana's larger towns, paid *ad valorem* taxes that were 73 percent higher than non-terminus counties. This result is confirmed by the estimates for town lots. An increase in the share of town land in the total land value in a county of one percentage point increased that counties *ad valorem* taxes by 2.5 percentage points relative to other counties. Finally, the estimates for latitude address directly the concerns of southern counties, who felt they would pay higher taxes under the *ad valorem* scheme. Instead, northern counties paid slightly higher *ad valorem* taxes than southern counties relative to the per acre tax.

The regression estimates only emphasize what the eye sees in the raw data. The dozen or so counties that paid substantially higher *ad valorem* taxes were the primary beneficiaries of

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[20]There are no sampling issues in these regressions, the entire universe of Indiana counties is represented (barring missing information on a county), so the standard errors provide information more on the fit of the variables rather than their statistical significance.

internal improvement investment. Had the shift in revenue structure not been tied to the internal improvement program, the towns would have adamantly opposed the change to *ad valorem* taxation. Towns stood to gain the most from canals and railroads, and they were quite willing to exchange higher taxes for the benefits they saw just over the horizon.

In the legislative session that followed, Indiana again enacted two bills. One implemented the *ad valorem* property tax and the other authorized the Canal Fund to borrow up to $10,000,000 in five percent bonds to finance a network of canals, turnpikes, and railroads (as indicated on the map in Figure 1). This was the "Mammoth System of Internal Improvement" as the bill and the system came to be known. The new property tax was levied and a complete assessment of property values was made in 1837. Borrowing and construction on the Mammoth System began in late 1836, with construction concentrating on the Wabash and Erie and a small canal serving the Whitewater Valley in the southeastern corner of the state.

We can compare the property values from the 1835 prospective assessment with the 1837 actual assessment to see what happened to property values in counties without improvements, counties with internal improvements, and counties where two transportation routes crossed (terminus counties). Table 10 presents a difference in difference estimate for 1835 and 1837. The first row of the table compares the change in assessed value per acre across all counties in the state, which increased by $3.90 (assessed value per acre was $5.82 in 1835 and rose to $9.37 in 1837). Land values rose by $4.55 an acre in internal improvement counties and $2.74 in non-improvement counties, and by $8.29 an acre in terminus counties and $2.93 an acre in non-terminus counties (which included all the non-improvement counties and some of the improvement counties). The difference in difference was $1.81 for improvement counties, that

is the increase in the value of land attributable to being in a county with a proposed improvement, and $5.36 an acre in terminus counties. Being in a terminus county roughly doubled the assessed value of land (average assessed land value per acre per year when they were reported are given in Table 8 column (6) and (7)). Governor Noble was right about shifting the burden of taxation away from the southern regions, away from farmers in general, and onto towns in the north.

The lower panel of Table 10 shows the difference in land values in counties where the *ad valorem* revenues were 1.2 times the flat rate revenues. $4.91, and the difference in the counties where *ad valorem* revenues were less than .8 times the flat rate revenues, i.e. where property tax revenues were lower under the *ad valorem* tax, was only $2.99. Assessed property values rose in every county in Indiana between 1835 and 1837, but they rose much faster in improvement counties and where *ad valorem* taxes were higher than the old flat rate tax.

In 1839, as discussed earlier, the Morris Bank defaulted on their obligation to pay Indiana $500,000 every six months. In the summer and fall of 1839, construction slowed on the canals and eventually came to a halt as the state exhausted its sources of funds, even as the state continued to pay interest on bonds that it had not received. Property values began to fall. Property was reassessed in each year but the state did not publish county level figures in each year, published property tax assessments by county are available in 1842. The second column of Table 10 calculates difference in difference estimates comparing 1837 to 1842. The decrease in property values statewide is $4.21, in internal improvement counties $5.49, in non-improvement counties $2.80 and in terminus counties $9.06. More than all of the increase in assessed value associated with internal improvements was wiped out between 1837 and 1842. Indiana defaulted

on its interest payments in 1841. We have more complete data for 1842. Table 8 shows that acres of taxable land rose from 6,186,000 in 1837 to 13,646,000 in 1842, more than doubling as anticipated in 1836 (column (3)). Value per acre rose from $5.41 in 1835, to $9.87 in 1837, and then fell back to $5.37 on 1842. Total property tax revenues in 1842 were $393,248 (column (8)). If land values had remained at $9.87 revenues would have been roughly $700,000 and Indiana would have been able to service the debt on all $12 million in bonds outstanding.[21]

Indiana defaulted in 1841 because the value of land in Indiana fell. Indiana had used changes in the taxation of land to coordinate a political solution to the impasse that prevented the state from realizing the value of millions of acres of land that were not accessible to water transportation and therefore not suitable for commercial agriculture. There was nothing wrong with the economics of Indiana's logic or the decision they made in 1836. Had land values stayed near their 1837 values Indiana would not have defaulted. The clincher to the argument is the Whitewater Valley. The Whitewater Canal was purchased from the state by a private investor from Cincinnati who completed construction on the canal. Property values in the Whitewater Valley did not fall between 1837 and 1842. Had Indiana been able to complete its Mammoth System of canals, they would not have defaulted.

Although there was much speculation at the time, there is very little evidence of venal corruption in the administration of the Indiana Canal fund, and certainly no one concluded that the system failed because of venal corruption (Fatout, 1972). How did Indiana react?

6. Constitutional Changes, 1842-1851

Indiana's situation in 1841 was not unique. Indiana, Illinois, Michigan, Pennsylvania,

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[21]Indiana also had $2 million in bonds outstanding that it had invested in the State Bank.

Maryland, Louisiana, Mississippi, Arkansas and the Territory of Florida all defaulted on their bonded debts in 1841 or 1842. Alabama, New York, and Ohio nearly defaulted (Wallis 2005, Kim and Wallis 2005, Wallis, Sylla, and Grinath 2004). Mississippi, Arkansas, Michigan, Louisiana, and Florida eventually repudiated all or part of their debts. Indiana and Illinois worked out an arrangement with their bondholders. Indiana agreed to pay half the principle on their bonds and the bond holders were given direct ownership of the Wabash and Erie canal in compensation. The canal was completed but never profitable because of the competition from railroads.

The situation in every state was different, but they shared some common factors. One common factor was borrowing. States that didn't borrow didn't default, and of the top 10 borrowers measured in per capita debt only Alabama did not default. One difference across states was the extent of venal and systematic corruption. Deep venal and systematic corruption was involved in both Arkansas and Mississippi in 1837, some in the Territory of Florida as well. In the northern states there was little or no evidence that the failure of state investments was do to outright corruption. States concluded that they had made systematic mistakes caused by the ability of the polity to manipulate the economy. They framed their argument in a common framework, but without common terms.

There was and is nothing about "democracy" that prevents voters, taxpayers, legislators, and their governments from making mistakes like these. In order to understand how the states responded to the default crisis, we can draw on the simple public finance/political economy framework laid out in Wallis (2005). Whether we are talking about banks or canals, suppose an infrastructure investment serves a minority of voters and taxpayers. Simple majority rule will

prevent such a project from being funded out of general tax revenues, since a majority of voters will bear costs for which they receive no gain. Likewise, it is impossible to build canals to every county or town, so the state cannot build a "small" canal to every county. The state may be able to fund a small amount of education in every county and benefit a majority of voters and/or counties, call that "something for everyone." Neither of these options works well for banks or canals. A third option was pursued by Indiana, what we can call "benefit taxation." When Indiana authorized $10 million in new bonds 1836, the tax rates were the same everywhere in the state, but the effect of the canals on assessed value was different, as we saw in the previous section. Under the right circumstances, a majority of voters could be willing to vote for legislation approving bonds for canal construction, even if the canal only benefitted a minority of the population.[22]

The fourth option had several possible dimensions. In general we can call it "taxless finance," a proposal where taxpayers and voters undertake a contingent liability in return for a perceived benefit. For example, Pennsylvania and Maryland did not raise taxes when they began borrowing to build their canals. Instead, they borrowed enough money to service their bonds until expected canal revenues began to flow into the state Treasury. Unfortunately, the flow of canal tolls was not enough to service the bonds, and ultimately both Pennsylvania and Maryland

[22]The "right" circumstance had to be that voters in general thought that the canal would return some money to the Treasury. All voters expected their taxes to rise, in different amounts. As long as expected revenues offset the contingent taxes that voters and taxpayers in the counties where canals did not go, then a majority could support the legislation. That is what happened in Indiana.

had to institute and raise property taxes to service their bonds.[23] Borrowing against future revenues enabled states to fund current expenditures without raising taxes, hence taxless finance.

Another tried and true method of taxless finance was to give a private group monopoly rents in return for making the investment. The Charles River Bridge was an arrangement where Massachusetts gave a group of investors an implied monopoly on a bridge across the Charles River. If the investors did not build the bridge, they could not exploit their monopoly. Famously, Massachusetts later chartered another bridge company. When the Charles River Bridge Company sued to stop the new bridge, the Supreme Court of the United States ruled in favor of Massachusetts on a technicality. Had the original charter given the Charles River Bridge Company a clear exclusive monopoly, the Supreme Court would have upheld it.[24] The were many cases of exclusive privileges granted in special acts of incorporation. This was another form of taxless finance.

The third form was literally to grant tax exemptions or reductions to groups in return for providing a public service or infrastructure investments. Railroads, for example, were often given exemptions from property taxes or preferential tax treatment.

The problem with taxless finance from a political economy standpoint is that voters,

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[23]This history is told in a number of places. Wallis, Sylla, and Grinath 2004 provides a concise summary. For Pennsylvania see Hartz and for Maryland see ___.

[24]Justice Taney declared that the Court must construe corporate charters in the narrowest possible terms. The Charles River Bridge's charter did not include any explicit grant of monopoly or "words that even relate[d] to another bridge, or to the diminution of their tolls." Nor could the grant of a monopoly have been implied. The rights of the community to "safe, convenient, and cheap ways for the transportation of produce ... shall not be construed to have been surrendered or diminished by the state; unless it shall appear by plain words, that it was intended to be done." *Charles River Bridge v. Warren Bridge*, 36 U.S. 420 (1837) at 549-50

taxpayers, and perhaps legislators may not perceive the full cost of the taxless finance scheme. People may well believe that they are going to get a canal for free, only to find that the canal charges monopoly tolls or, as in Pennsylvania and Maryland, when canal tolls fail to materialize that their taxes must go up *ex post* to pay for a canal they thought would be free *ex ante*. There can be no doubt that democracies do not do well at making decision where benefits are easy to see and costs are hard to see (or vice versa). Taxless finance schemes were tools easily used by factions to manipulate economic interests to consolidate a political coalition.

Although no state used the term taxless finance, every state was concerned with the possibility that a political faction could use economic privileges to build a political coalition, and providing groups benefits for which they did not have to pay taxes was a fundamental way to do just that. Because taxless finance could work through other channels than borrowing money, it was important to close off opportunities for the legislatures to create special economic privileges through legislation.

Eleven existing states wrote new constitutions between 1842 and 1851 (Louisiana wrote two), shown in Table 12. In addition, Iowa, Wisconsin, California, and Florida wrote their first constitutions which I will call "new" states (Iowa wrote a second constitution in 1857 as well). Table 12 gives the dates of the constitutions and whether the new constitution contained provisions with respect to debt, corporations, and taxation. The details of the provisions are given in tables 13, 14, and 15.

Every state but Virginia contained a provision for state debts. The most common debt provision was a procedural restriction which required the legislature to borrow only for a single purpose, to raise taxes immediately by an amount sufficient to service the debt, and to approve

the higher taxes by a majority of voters in a referendum. States could only borrow if voters were willing to raise taxes immediately. This is the origin of the bond referendum in the United States, now common in every state, as well as in local governments. Eight of the states adopted a procedural restrictions, Indiana and Ohio banned borrowing for internal improvements completely, only Virginia had no provision for debt (Table 12). Three of the new state constitutions included a procedural debt restriction, Florida did not. Note that the provision were not limits on borrowing, the were limits on the procedures that state legislatures and governments had to go through in order to borrow. They were limits on procedures not functions.

Eight of the states required that the legislature pass general laws for incorporation of business (Table 14), three of the new states did so (again, Florida was the exception). Seven states prohibited special acts of incorporation for any purpose, as did two new states. Six states prohibited state investment in private corporations, Illinois only prohibited investment in banks, and all four of the new constitutions prohibited state investments in private corporations. Three states banned banks altogether, and six states required a general incorporation act for banking (free banking), in four the general banking act had to be approved by voters.

Six states required uniform rules for taxation, a general rule for taxation, and three of the new states required uniform rules for taxation (Table 15). Six states required taxation by value (*ad valorem)*, as well as one new state.

Two features of the tables stand out. The first is the relative uniformity of adoption. With the exception of Virginia and Florida most states attempt to do something explicitly about debt and corporations, and about half the states changed their rules with respect to taxation. All of

these provisions are, in the normal sense of the word, limits on government. The second feature is the lack of southern states in the tables. Virginia and Louisiana wrote new constitutions (Louisiana wrote two, it is the champion constitution writer, it has had twelve to date.) Virginia does not address debt, corporations, or taxation; Louisiana addressed all of them. There is also only one New England state, Rhode Island. Unlike the southern states who reformed neither their constitutions or their laws, several New England states implemented general incorporation acts (or similar legislation) without a constitutional amendment. The reasons for these regional differences are almost completely unexplored in the literature.

It is difficult to pass a constitutional provision which enjoins legislatures from doing stupid stuff. The likelihood of bad decisions become higher as the costs and benefits of proposed policies become more difficult to discern. A key element in the procedural debt provisions was requiring that a majority of voters approve a tax increase before money could be borrowed. My favorite quote from the Indiana literature is from Judge Kilgore, who spoke against the absolute prohibition on state debt at the Indiana Convention in 1851. He remarked that "I appear to be the last survivor of all the members of the Legislature of 1836 who voted for that bill. I know there are many still living, they seem to have been afflicted – perhaps in judgement for their political sins – with a loss of their memories. [Laughter]."[25] Kilgore went on to articulate not only an explanation of what happened in 1836, but how it could be prevented in the future:

> If, with the light of the past to guide them, with the heavy burthens of the present to remind them of past errors, the people coolly and deliberately decide at the ballot-boxes to again borrow money, I shall aid to place no Constitutional barriers in their way to prohibit them from carrying out their will; *provided,* sir, that at the time they give the Legislature authority to contract a debt they provide by direct taxation for the payment of

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[25]Kilgore Speech, Thursday, Nov. 21, *Debates*, [1850], vol. 1, p. 676.

> the interest, and the canceling of the principal, within twenty-five years. Right here, sir, and nowhere's else, was the great error committed by the people and their representatives in 1836. Gentlemen may confine themselves to the simple assertion that the people of that day were mad; I shall not deny it; they were mad, and very mad; but, Mr. President, had a provision been made before the public debt was created that a direct tax must be levied, high enough to pay the interest and to wipe out the whole debt in eighteen or twenty-five years, all would have been comparatively well. A provision of this kind, sir, would have brought the people to their right senses, and my word for it, before State Bonds to the amount of four millions of dollars had been sold, they would have risen and denounced the whole system as projected.[26]

Judge Kilgore called for benefit taxation and castigated the perils of taxless finance, and called for a direct tax, which in 1850 meant *ad valorem* property taxation, before any future debt could be issued.

Indiana was one of the last of the existing states to rewrite its constitution. It was not until 1851 that state finances had been straightened out enough to move forward on a new set of constitutional arrangements. Indiana went further, however, than any existing state in implementing general laws. As Wisconsin had done it is original constitution of 1848, the Indiana constitution of 1851 required the legislature to pass general laws whenever possible for seventeen different purposes:

> The General Assembly shall not pass local or special laws, in any of the following numerated cases, that is to say: Regulating the jurisdiction and duties of justices of the peace and of constables; For the punishment of crimes and misdemeanors; Regulating the practice in courts of justice; Providing for changing the venue in civil and criminal cases; Granting divorces; Changing the names of persons; For laying out, opening and working on, highways, and for the election or appointment of supervisors; Vacating roads, town plats, streets, alleys and public squares, Summoning and empanneling grand and petit juries, and providing for their compensation; Regulating county and township business; Regulating the election of county and township officers, and their compensation; For the assessment and collection of taxes for State, county, township or road purposes; Providing for supporting common schools, and for the preservation of school funds; In relation to fees or salaries; In relation to interest on money; Providing for opening and conducting elections of State, county or township officers, and designating the places of

[26]Ibid, p. 676.

> voting; providing for the sale of real estate belonging to minors, or other persons laboring under legal disabilities, by executors, administrators, guardians or trustees.[27]

Indiana was preventing the legislature from manipulating interests over a wide range of economic and social activities. I will call these “general law provisions” as they cover a wide variety of state activities. It was the culmination of the intellectual development that began with 18th century political theory, filtered through the unique and contingent experience of the states that made up the United States.

Once these provisions were adopted, states quickly began to appreciate there benefits. After 1850, there was widespread adoption of debt restrictions and general incorporation laws. By 1900 almost all states had constitutional provisions regarding debt and incorporation, except the New England states which had legislation rather than constitutional provisions. General taxation spread, but then receded in the early 20th century.

The constitutional changes in the 1840s were movements towards general laws and away from special legislation. Special legislation applied to one group or a small number of groups, even to one person (which was often called a private bill, both at the state and national level). Voters and politicians quickly came to understand that changes made in the institutions governing the creation of business corporations could have similar salutary benefits in other areas of state policy. The ability to create special privileges through laws that treated different people differently could be used to systematically manipulate economic interests and through them the political process. Political manipulation of economic interests could operate in any area of state policy in which the legislature could create a rent for a specific individual or group. Political manipulation of interests was not limited to the creation of business corporations or even to corporations in general.

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[27] Indiana Constitution of 1851, Article 4, Section 22.

Beginning with Wisconsin in 1848, states required that general laws govern the formation and operation of counties and municipal governments. Local governments in the United States are creatures of the states. The structure of a local government polity, including how it taxes, spends, and borrows, is in principle completely within the control of the state government. Granting of local exemptions and privileges could be politically manipulated by state legislators for political ends. Mr. Taylor, a delegate to the 1908 constitutional convention of Michigan, highlights the similarities between municipal corporations and private corporations: "It seems to me that the successful operation of a municipal corporation is not vastly different from the successful operation of an industrial corporation."[28] General incorporation laws for counties and other local governments tied the hands of state legislatures in the same way that general incorporation acts for businesses corporations did.

Taking account of the whole environment in which the rules and policies governing business corporations pays off when we compare the adoption of general rules for business incorporation, municipal incorporation, and general law provisions. The idea that general incorporation acts were adopted by states as a way to deal with systematic corruption is just that: an idea. We can test the idea by examining why people said they acted as they did. Another, and depending on your preferences for evidence, perhaps stronger test is to see if they took similar actions in other areas of society. If general incorporation was seen as a solution to the problem of systematic corruption, then it should have been applied to other organizations. It was.

[28] *Proceedings and Debates of the Constitutional Convention of the State of Michigan, 1907-1908, Vol 1 and 2*, (Lansing: Wynkoop, Hallenbeck, Crawford, Co, 1908), II.818.

Table 16 gives the dates at which states changed their constitutions to require general incorporation acts (for business). Table 17 gives the dates when states changed their constitutions to mandate general laws for the incorporation of municipalities and Table 18 gives the dates when mandated general law provisions for a wide variety of purposes.

The tables are a hard to digest and compare at a glance. Figure 2 graphs the first year a state adopted a constitutional provision mandating general incorporation on the horizontal access, and the first year a state mandated general law provisions on the vertical access. Figure 3 does the same, only the vertical axis represents the first year that a state mandated general laws for municipal governments. Although there is a strong diagonal in the graphs, this results from the fact that new states that entered after 1850 tended to adopt provisions that mandated general laws for incorporation, general laws for municipal governments, and general law provisions. For example, the large group of states that entered the union in 1889, all included all three provisions in their constitutions. This can be tracked in the tables.

There was not a strong relationship between when a state adopted a general incorporation provision and the other two provisions between 1840 and 1870. Most of the entries in Figures 2 and 3 lay above the 45 degree line, indicating that the state adopted a general incorporation provision before it adopted a general municipal provision or a general law provision. Depending on whether new states that adopted all three measures in the first constitution are included or not, the average difference between the date of the first general incorporation provision and the first general law provision is 10 years (7 years including the new states) and the difference between incorporation provisions and municipal provisions is 14 years (9 including new states).

Figure 4, however, plots the dates of adoption of general law provisions and of municipal provisions, and shows the striking relationship between the two. Here the adoption dates fall

largely on the 45 degree line (the three exceptions being Michigan, 1850 general law provisions and 1909 municipal provisions; Alabama, 1861 for general laws and 1901 for municipalities; and Wisconsin the very first state with provision for municipalities in its first constitution in 1848, and a general law provision in 1871).

The figures show that states were learning. It became increasingly common for states to adopt a package of general law provisions. Not just for corporations, but for municipalities, and for laws in general. The records of the constitutional convention debates reveal how often states were using other states' experiences to help guide their new constitutions. Mr. Sibley of Minnesota not only looked at other states' constitutions, but also spoke directly with other legislators from Iowa, and specifically notes that the Michigan provision had been shown to work particularly well.

> In the pretty extensive communication I have had, within the last few weeks, with persons from that State [Iowa] upon this subject [of general laws], I have heard no one complain that all the objects of such corporations could not be attained under such laws….I think the provision on this subject in the Constitution of Michigan is preferable to that in the Constitution of the State of New York….this provision of the Michigan Constitution has been found to work well. (*Debates and Proceedings of the Minnesota Constitutional Convention*, 1857, 128)

The experience of states continued to accumulate. Mr. McDermott, in the 1890 constitutional convention in Kentucky, speaking in favor of a general law provision, noted the experience of other states explicitly. When he talks of excluding or restricting the classes, he refers to the types of functions for which general acts must be passed and special laws are restricted or prohibited, pulling from the experiences of other states and describing what states had done previously and where they had gotten the ideas from.[29]

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[29] *Official Report of the Proceedings and Debates in the Convention Assembled at Frankfort, on the Eighth Day of September, 1890, to Adopt, Amend or Change the Constitution of the State of Kentucky*, 4 vols, (Frankfort, Ky.: E. Polk Johnson, 1890), III: 3992.

This system is not an experiment. We tried it, to a slight extent, in the Constitution of 1849. We there declared that certain things were never to be provided for by a special or local act. In 1865 Missouri followed our example, and took the lead we gave her, largely increasing the number of classes entirely excluded, and forbidding the passage of other local or special acts which general acts could provide for. In 1870 Illinois tried the same plan and enlarged the list. In 1871 Wisconsin followed suit. In 1872 West Virginia tried the Missouri Constitution of 1965. In 1873 Pennsylvania still further increased the number of classes excluded, and required that a notice should be published before any other private bills should be passed, and forbade the enactment of any private act if a general law could be made applicable. In 1874 New York followed Pennsylvania and Missouri. In 1875 Missouri, after and experience of ten years, of the plan I have described, enlarged it. In fact, she adopted restrictions that are, in effect, as severe as any as those we recommend. This shows that Missouri found she was moving in the right direction. In 1875 New Jersey imitated Pennsylvania and Missouri, and in 1876 Texas completely copied the provisions of the Pennsylvania Constitution. We compared all of these provisions, and we embodied in this section the best of them, and we examined a great many of the local and private acts of our State." (Remarks of Mr. McDermott, *Official Report of the Proceedings and Debates in the Convention Assembled at Frankfort*1890, III: 3992.)

Mr. McDermott is quoted a length to show how states were deliberately and consciously learning from one another. As the nineteenth century unfolded, states progressively tied the hands of state legislatures by requiring them to pass legislation that applied equally to everyone, particularly with respect to the formation of organizations, be they business corporations or cities. Figures 2, 3, and 4 and the tables that underlay them give considerable support to the idea states were adopting a common institutional form, the general law, and applying to many distinct and disparate areas of state policy.

Adoption of general laws on such a widespread basis was likely not driven only by the interests of businesses. The scholars who studied the adoption of general laws note remarkably similar justifications for the adoption of corporate, municipal, and general law provisions. Binney (1894) and Ireland (2001) give detailed reports of how the

supporters of these provisions argued for their adoption. People were often very concerned about corruption.[30] According to a delegate to the Alabama Constitutional Convention of 1901, corruption across state legislatures "can all be traced to the effort to secure the passage of local or private bills, conferring some special or valuable privilege, franchise or pecuniary advantage". (Ireland, pp. 277-278).

And Binney similarly, although he was not writing history, he was writing about current legal events:

> What may be called the science of legislation – the careful adaptation of laws both to the needs of the State and the various classes of people composing it, and to the body of law already existing, the determination of the proper scope of general laws, and of the circumstances which call for legislation of a local or special character – was too little regarded, and as time went on not only was the volume of special and local legislation needlessly increased, such acts being frequently passed as to matters that could have been provided for under a general system, but private schemes were often pushed through the legislatures by unscrupulous men, to the sacrifice of public interests, each separate locality was liable to unwise interference in its affairs, and distracting changes of its governmental system, and the law, as to many matters, was thrown into confusion.
>
> The natural consequence of all this was the growth of a very general feeling of hostility to all local and special legislation. One State after another sought, by changes in its Constitution, to check the excesses into which its legislature had fallen in this respect, and the influence of the example so set is seen in the Constitutions of all the more recently organized States. That some effectual restrictions upon special legislation were needed has been repeatedly testified to by the courts of various States when called upon to enforce these restrictions. Thus, in Indiana, the earliest State to adopt them, their object was stated as being "to restore the State from being a coterie of small independencies, with a body of local laws like so many counties palatine, to what she should be, and was intended to be, a unity, governed throughout her borders on all subjects of common interest by the same laws, general and uniform in their operation."[31]

[30]Although Friedman (2012) argues that corruption was not an issue raised at the Maryland convention of 1864 which adopted the first general law provision in that state.

[31]Binney, 1894, pp. 6-7. The last quote is referenced to Maize v State, 4 Ind. 342.

Historically, general laws for business corporations were the leading edge of the movement towards general law provisions across a range of government policies. During the 1847 constitutional convention of Illinois, the focus on the "evils of special legislation" was directed at business corporations. Mr. Bosbyshell was one of many delegates to comment on the use of special acts for corporations, opposing it because special incorporation could be "granted to the few, and wholly denied to the many" and was thus against it no matter the form or the intent.[32]

The 1870 constitutional convention of Illinois highlighted the move for delegates to focus on the evils of special legislation with respect to municipalities. Mr. Washburn spoke to the evils of special legislation and the greater difficulty in passing general legislation for municipalities. He noted delegates to the Convention had been complaining and denouncing special legislation; however, when it came to addressing the one-third of special laws had been used to incorporate cities and towns, had started backing down. As Mr. Washburn noted, when it comes to conflict with their own local interest, are opposed to it, which was a hurdle that had to be overcome to pass general legislation.[33]

> I wish to remark that if there is one evil more than all others, afflicting the people of this State, it is that in relation to special legislation, which has troubled us for the last six or eight years. If there was one reason stronger than all others for having a Convention meet here to amend our Constitution, it was this — to put a stop to the evils of special legislation. If there is one thing that the people demand at our hands more than all others, it is that we put an effectual end to special legislation. And I had supposed that the committee were a unit on that subject. I have heard from day to day, in this Convention, complaints and denunciations against special legislation, and until the last few days I have not heard a single individual object to those complaints and denunciations. If we

[32]*The Constitutional Debates of 1847, Collections of the Illinois State Historical Society Volume XIV*, (Springfield: Illinois State Historical Library, 1919), 651.

[33]Debates and Proceedings of the Constitutional Convention of the State of Illinois, I.597.

> look at the records of the last four, five or six years, upon this subject of special legislation, we find that special laws occupy eight or nine hundred pages of those records, and even more than that in the work of the last Legislature. And it is not to be denied or disputed, but if we look further it will be apparent that, perhaps, more than one third of those special laws have been passed to incorporate cities and towns. The greater portion, I say, of this greatest of all public evils lies in the very direction of incorporating cities and towns. And when the people have charged us particularly with reference to this point ; have demanded of us that this abomination of special legislation — this prolific source of corruption, both in legislators and people, shall cease — upon squarely meeting the proposition to do this, there is a general back-down. Men who have seemed most anxious on this subject in general, when it comes to conflict with their own local interest, are opposed to it. (*Debates and Proceedings of the Constitutional Convention of the State of Illinois*, 1870, I.597)

General laws required that governments support organizations by providing rules and legal identities that applied equally to all groups and all citizens, a constraint on legislatures that spread to many areas of legislative competence in the second half of the 19th century. The close association shown in Figure 3 was, in fact, a close association and not a statistical artifact. People at the time thought that general laws that applied equally to everyone and limited the ability of politicians and legislatures to create special privileges were a way to improve how democracy worked.

Active enforcement of general law provisions continues right up to the present. Friedman (2012) notes that the controlling case for the Maryland provisions is the *Cities Service Corporation v. Governor,* (A.2d 663 (1981)). Judge J. Eldridge's decision for the majority undertook a history of the general law provision in Maryland, encompassing dozens of cases. While the details are complicated, Maryland had passed a law requiring the manufacturers of gasoline to divest themselves of ownership of retail gas stations. The divestiture law was amended in 1979 in a way that enabled Montgomery Ward (a subsidiary of Mobil Oil) and Southern States Cooperative to own and operate gas stations. Cities Services filed to prevent

them from doing so, claiming that it violated the general law provision. The court upheld the Cities Services claim.

A substantial legal sub-literature on special and local laws demonstrates that the general law provisions continue to matter, that private and public individuals continue to use the constitutional provisions to monitor and discipline state legislatures.[34] Treatment in the legal history as well as decisions in the Courts tends to mix the state prohibitions on special and local laws with the Equal Protection principles of the federal constitution. I am afraid that considering the 14th amendment puts me in danger of writing another 50 pages. Let me just suggest that the motivating interpretations of the 14th amendment initially ran parallel to the state level motivations in creating the constitutional general law provisions (McCurdy, 1993 on Justice Field).[35]

In keeping with the approach of the paper, what mattered after the Civil War was not why states or the national government said they were enforcing general law provisions. What mattered is that they did, and at both the state and national level, governments began moving decisively towards impersonal rules.

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[34]Friedman (2012), Marritz (1993), Horack (1936), Horack and Welsh (1937), Schultz (2014), and Long (2012).

[35]McCurdy's discussion of Field's dissenting opinion on the Slaughter-house cases makes clear that field was not blindly asserting a laissez-faire ideology, but holding to the logic of general law provisions: "Field dissented. He conceded that slaughterhouses had long been considered *prima facie* nuisances, and he insisted that state legislatures might altogether prohibit butchers from plying their noxious trade in densely populated cities.35 But in his view, the state's duty to protect the people from unhealthful businesses could not "possibly justify" legislation framed "for the benefit of a single corporation." Field was particularly concerned with the implications of Thomas Durant's brief for the State of Louisiana, in which it was argued that a state legislature might make any business "the exclusive privilege of a few .. ·. if the sovereign power judges that the interests of society will be better promoted." McCurdy, 1993, p. 977.

7. When Really Bad things happen: real limits on government.

Table 19 lists each of the states and the really bad things that happened between 1790 and 1865: blatant political manipulation of the economy, government default, secession, and civil war (for which every state gets an "X"). Table 20 lists the same states and the really bad things that happened between 1865 and 1914. The table also lists whether the states have the classic institutions: secure property rights, effective contract law, rule of law, checks and balances, separation of powers, and constraints on the executive. Every state had them by 1790 or at the time of statehood. It also lists when the state adopted general laws for corporations, municipalities, and general law provisions, or an "I" if they had the provisions in 1865. It is time to take a leap.

The almost blank columns (5) and (6) of Table 20 may seem like normality. They aren't. Of the 14 European countries in the Maddison data base represented in Table 4, 5, 6, and 7, four would not be clear of "X's" in the columns until after 1945: Germany, Italy, Spain, and Portugal. Austria and Greece are not in the 14, but they would not have made it either. As late as 1860, only Britain and the US would have made it without some really bad things happening. No Latin American country, with the possible exception of Costa Rica would have a clean slate in the 20th century.

What is historical normality are the populated columns of Table 19, the states where really bad things happened between 1790 and 1865. All of the states had the normal suite of good institutions by 1790, but in none of the states were there effective institutions that prevented the political system from manipulating the economy for political purposes. Take banking as an example. Before 1812 it was almost impossible to get a bank charter in

Massachusetts if you were not a member of the Federalist Party (Lu and Wallis, 2017); in New York until 1836 it was almost impossible if you were not a member of what became the Democratic Party (Bodenhorn, 2006); in Pennsylvania the state limited the number of bank charters to maximize the price they could get for charter fees into the 1840s (Wallis, Sylla, and Legler, 1994; Schwartz 1987); in Maryland the state agreed to prevent any new banks for twenty years if the existing Baltimore banks would build a road to Hagerstown; Indiana, Missouri, Alabama, Kentucky and Illinois had effectively monopoly state owned banks, run by Democrats in some states and Whigs in others. After 1865, free entry existed in banking in almost every state and there are no histories in which political manipulation of banking plays a prominent role. The federal government enacted free banking reforms during the Civil War, and the national banking system was essentially the same free entry system that the states had begun to adopt in the 1830s and 1840s.

Free entry into banking, tied as it was to restrictions or outright bans on branch banking, produced an banking system in the United States like none other in the world. Thousands of small banks, tied together in regional systems of clearing and deposit holding were structurally liable to panics. As Charles Calomiris has argued, the American economy would have been better served by a system of large integrated investment banks. But the adoption of free banking at the state and national level was not an economic policy adopted for economic reasons. It was an economic solution to a political problem. Access to banking had been systematically manipulated in almost every state at some time in the early 19th century. Almost every state would have shown an “X” in Table 19 before 1840. Free entry in banking was a solution to the political manipulation of the right to print money. That it caused periodic economic instability,

and the fact that the instability seemed to be baked into the system, was less important than the political benefits that open access to banking provided and still appears to provide.

All of the constitutional provisions discussed in the previous sections created real limits on state governments, their texts establish limits. But they created much stronger limits on government than the texts establish. Most of these limits did not forbid legislators to do certain things, although were provisions like the prohibition on state investment in private corporations. Most of the provisions regarded procedure, like the procedural debt restrictions, or on the form of general laws that the legislatures must pass. There was a persistent and pervasive movement to require general laws. This was not a limit on what legislatures could legislate about, it was a limit on legislative discretion.

Legislatures were constrained from treating different individuals and different groups differently, over a wide range of government functions. On those dimensions that ability of the government to manipulate the economy was severely limited. Mandating general incorporation acts for businesses was a critical limit, for it changed the dynamics of the competitive economy, but the general principle applied much more widely to government policies. The limits are not perfect, but they have been durable and generally effective. The right standard is not an ideal pure impersonal rule and enforcement, no rules or laws universally treat everyone the same. The right standard is something like the very imperfect limits the states in the United States began to adopt in 1840, which should explicitly include the limits on legislative discretion imposed by general laws.

American states in 1800 had fairly effective rule of law, but they also had laws that treated different people differently. Massachusetts Federalists broke no laws when they limited

bank charters to Federalists, that was well with in the discretion of the legislature. They all fell within the rules of the laws as written before the 1840s. Political manipulation of the economy was neither illegal nor immoral in 1800, it was the way governments had worked from time immemorial. There little in the new democratic institutions created by the state and national constitutions capable of controlling or eliminating the manipulation of economic interests. So how did the limits put in place in the 1840s and later change the nature of limited government?

There are two elements, both dynamic, one internal to the political process and one completely external. Within political parties and coalitions, as well as within legislatures, there were still many dimensions on which coalitions could build arrangements that would enable durable groups to remain in place. But they could no longer to do by creating clear economic privileges that prevented entry of other organizations into politics or economic activities, whether the other organizations were political, economic, or some combination of the two. This limited the instruments available to a faction to remain in control. That put Hofstadter's baseball analogy into play: political parties could expect to lose regularly, and so changed their preferences towards rules that could be used against themselves when they were out of office.

Simultaneously, and almost certainly more important, the political system was unable to prevent new economic, religious, educational, or social organizations from rising and competing. In a fundamental way, the political process lost control of the economic system. This did not mean that the government could not regulate economic organizations, they could and did in many ways. It meant that the government largely abandoned limits on entry and, as a result, largely abandoned the tools to affect industry dynamics. The government extended organizational tools, like corporate charters, to everyone. Laws became more impersonal in the

form and enforcement. Critically, groups or interests that the government moved against, could organize to push back. Both politics and economics became more competitive as a result. This is what North, Wallis, and Weingast call a open access social order. The dynamic interaction of economics and politics creates and sustains limits on what the government can do without mobilizing economic, political, and social forces that push back.

The great tragedy of American history is the Civil War. The origins of the war are rooted in a constitutional agreement in which two coalitions of powerful political actors reach an agreement in which the rules under which they will operate are different. The rules are not wildly idiosyncratic or personal, but the states retain the freedom to adopt different rules regarding a wide range of activities of government. When southern fears that the national rules would be changed under Lincoln and Republic leadership, really bad things happened. The South seceded, the North decided to fight, 600,000 deaths later and after a decade of reconstruction, the Southern states were readmitted to full membership on the Union on identical terms to the Northern states, now under the constraint of the 13th, 14th, and 15th amendments. General federal laws were put into place that did not exist before. In the meantime, general laws at the state, not the national level, created the kind of economic competition capable of sustaining political competition at both the state *and* national levels.

When shocks occur, and they continue to occur, political groups in the United States maneuver as best the can to change the laws in their favor, under two constraints. First, the laws for many things will apply equally to everyone. Two, if a faction, party, or coalition loses, the laws they made as winners continue to apply to them as losers. After 1861, no disgruntled coalition of powerful individuals and organizations decides to overturn the social order in hopes

of getting a better deal. Really bad political outcomes stop happening. Shrinking slows, growth ensues.

8. Conclusions

This paper tries to establish three features of the world, one that applies to all the societies people live in, and two to the specific history of the United States.

The first feature is the idea of social orders developed by NWW and articulated here in a sharper form. Natural states rely on political manipulation of the economy to sustain political coalitions to ensure order. As a result, the institutional rules that these societies can sustain are identity rules, rules that depend on the social identity of the individuals and organizations involved for both the form of the rule and its enforcement. Because the world is an unpredictable place, while identity rules can promote stability, they are always subject to changes in underlying distributions of power that make the existing set of rules inconsistent with the reality on the ground. As a result, rules are less credible through time; some investments that would be made under predictable rules are not; and the extent of the market, the degree of specialization, and the division of labor that can be supported are reduced. Those are static effects. Dynamically, exogenous or endogenous shifts in the conditions of elites lead to changes in the rules and reconfiguration of elite agreements. The likelihood of such changes reinforce the need for identity rules. In the event of a crisis and breakdown in social order, these societies do not restore order by moving to impersonal rules, but crafting new identity rules and relationships to address the current crisis. The short run dynamics of restoring order, keep these societies in a long run situation of fragility and periodic shrinking.

The second feature is that the United States at the time of independence was a natural state, not an open access order. The political and economic institutions embodied in the new state and national constitution were good institutions. As Gordon Wood said, the American founders were the best political theorists of their time. But they were natural state theorists. The political institutions of democratic elections and representative governments structured with separation of powers and balance of interests was not capable of resisting systematic attempts to manipulate the economy for political purposes. Even Indiana in the 1830s, when no one did anything that was venally corrupt and no one abused their public office for private gain, the political system still systematically manipulated the economic interests of citizens, voters, and taxpayers to build majority support for an enormous infrastructure investment program. The program failed, largely through events beyond Indiana's control but for which Indiana was partly responsible. At least half of the existing states found themselves in a similar situation to Indiana in the early 1840s.

Americans in 1840 clearly understood that the institutions they had adopted in the 1780s and 1790s remained corruptible in the classic republican sense of the term. Even though Indiana acted with probity, foresight, and a lack of venal corruption in the 1830s that would put them in top quintile of developing countries today, when they attempted to explain to themselves how they had gotten in such a pickle they answered with the classic answers: political factions had manipulated the economic interests in order to build a majority.

The third feature, in the 1840s states in general, and in 1851 Indiana in particular began adopting a suite of constitutional provisions that reflected a common understanding of what had gone wrong in the 1830s. In no state were these constitutional provisions adopted to stimulate

economic growth and development. As a very nice new paper by Eric Hilt shows, states were often could not decide between banning banks altogether or moving to free entry (Hilt, 2017). Indiana and Ohio banned new state borrowing for internal improvements altogether. Had the states been interested in promoting growth in the 1840s, they never would have banned banks or eliminated state borrowing, that was not a recipe for economic growth and development.

The constitutional changes in the procedures that state legislatures had to follow were designed to reduce legislative discretion. Specifically legislative discretion to create special privileges for individuals or groups. The constitutional changes were designed to deal with the contingent and idiosyncratic problems each state faced and the provisions were not identical. But they were grounded in a shared intellectual understanding about the perils of democracy in a natural state. The changes were not designed to produce modern developed societies. But the changes struck at the heart of the logic of the natural state. The American states found the key to modern economic and political development by accident. No one in the 1840s could have understood or predicted what would happen over the next century and a half.

Were the limits on government put in place in the constitutions of the 1780s and 1790s sufficient to limit government enough to produce modern development? No. Did the institutions enshrined in the Washington Consensus exist in American states in the 1790s: secure property rights in land and other assets, protections against government expropriation, secure contract law, rule of law generally, and effective constraints on executive power? Yes. Did those institutions prevent really bad things from happening in the American states or the United States up through 1861? No.

Really bad things happen when governments over step their limits on their own initiative, or because circumstances seem to compel the politically active part of the population to condone violation of the limits because circumstances demand it. Really bad things happen when the politically active part of the population, the elite individuals and organizations, decide to change the rules or fight. The United States and a handful of other countries have managed to avoid those outcomes internally. They have been involved in external wars, but not internal wars. We need to understand how the United States and those other societies actually managed to limit their governments and eliminate the really bad outcomes.

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Table 1
Really Bad and Bad Outcomes

Column A:	Column B:
Really Bad Outcomes	Bad Outcomes
Civil War	Rent seeking
Coups	Redistribution of resources through taxation and spending
Non-Constitutional Regime Change	Price Controls
Expropriation Seizure Nationalization Genocide	Interference with Markets Limits on civil and political liberties
Deliberate Political Manipulation of the Economy	

Table 2: Penn World Table 8.0: Growing and shrinking, 1950-2011

Per capita income in 2000	Frequency of growing years	Average growing rate	Frequency of shrinking years	Average shrinking rate
Over $20,000	0.84	3.85	0.16	-2.22
$10,000 to $20,000	0.80	4.85	0.20	-4.25
$5,000 to $10,000	0.78	5.15	0.22	-4.89
$2,000 to $5,000	0.72	4.72	0.28	-4.29
Less than $2,000	0.62	3.99	0.38	-4.32

Sources and notes: Penn World Table 8.0, http://www.rug.nl/research/ggdc/data/pwt/pwt-8.0. The "Real GDP per capita (Constant Prices: Chain series)" and their calculated annual growth rates for that series "Growth rate of Real GDP per capita (Constant Prices: Chain series)" were used to construct this table. Countries were first sorted into income categories based on their income in 2000, measured in 2005 dollars. Average annual positive and negative growth rates are the simple arithmetic average for all of the years and all of the countries in the income category without any weighting. The Penn World Table includes information on 167 countries. The sample runs from 1950 to 2011, although information is not available for every country in every year. Countries are included only where information is available at least as far back as 1970, resulting in a sample of 141 countries.

Table 3: Penn World Table 8.0: The contribution of growing and shrinking to the economic performance of countries by income categories, 1950-2011

Per capita income in 2000	Contribution of growing (frequency*rate)	Contribution of shrinking (frequency*rate)	Net rate of change of per capita income
Over $20,000	3.23	-0.39	2.84
$10,000 to $20,000	3.82	-0.88	2.94
$5,000 to $10,000	4.00	-1.13	2.87
$2,000 to $5,000	3.30	-1.27	2.03
Less than $2,000	2.47	-1.65	0.82

Source: Penn World Table 8.0, http://www.rug.nl/research/ggdc/data/pwt/pwt-8.0.

Table 4: Frequency of growing and shrinking, 18 European and New World countries, 1820-2008

	1820-1870	1870-1910	1910-1950	1950-2008
Growing	0.66	0.67	0.65	0.88
Shrinking	0.34	0.33	0.35	0.12

Source: Derived from Maddison (2010).

Table 5: Average rate of change of per capita income in all years, growing years and shrinking years, 18 European and New World countries, 1820-2008

	1820-1870	1870-1910	1910-1950	1950-2008
All years	1.40	1.31	1.23	2.55
Growing	3.88	3.16	5.20	3.06
Shrinking	-3.04	-2.30	-6.10	-1.23

Source: Derived from Maddison (2010).

Table 6: Contributions of growing (frequency*rate) and shrinking (frequency*rate) to long run economic performance (average rate of change of per capita income in all years), 18 European and New World countries, 1820-2008

	1820-1870	1870-1910	1910-1950	1950-2008
All years	1.40	1.31	1.23	2.55
Growing	2.47	2.10	3.33	2.72
Shrinking	-1.08	-0.79	-2.09	-0.16

Source: Derived from Maddison (2010).

Table 7: Maddison Data Base: Contributions of growing (frequency*rate) and shrinking (frequency*rate) to long run economic performance (average rate of change of per capita income in all years)

		1820-1870	1870-1910	1910-1950	1950-2008
UK	All years	1.50	0.92	1.02	2.12
	Growing	1.97	1.42	2.22	2.25
	Shrinking	-0.47	-0.50	-1.20	-0.13
Netherlands	All years	0.81	0.79	1.15	2.44
	Growing	1.23	1.59	4.04	2.57
	Shrinking	-0.42	-0.80	-2.90	-0.13
Italy	All years	0.39	1.10	1.02	3.00
	Growing	1.73	2.21	3.61	3.08
	Shrinking	-1.33	-1.11	-2.59	-0.09
Spain	All years	0.56	1.13	0.36	3.79
	Growing	1.63	2.45	2.07	3.89
	Shrinking	-1.07	-1.32	-1.71	-0.10
14 European countries	All years	1.22	1.23	1.26	2.70
	Growing	2.22	1.88	3.49	2.84
	Shrinking	-1.00	-0.65	-2.24	-0.14
USA	All years		1.77	1.64	2.04
	Growing		2.80	4.05	2.29
	Shrinking		-1.03	-2.42	-0.26
New World	All years	3.69	1.62	1.29	1.92
	Growing	5.77	3.01	3.31	2.24
	Shrinking	-2.08	-1.39	-2.03	-0.32
18 European & New World countries	All years	1.40	1.31	1.23	2.55
	Growing	2.47	2.10	3.33	2.72
	Shrinking	-1.08	-0.79	-2.09	-0.16

Table 8
National Public Land Sales, Indiana Land Sales,
Indiana Land Values and Taxable Acres
1834 to 1843

Year	National Land Sales	Indiana Land Sales	Acres Taxed	Value of Land & Improvements	Value Town Lots	Value Per Acre Land	Value Per Acre Land + Town	Total Taxes Received
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1833	3,856	555	4,329					$40,758
1834	4,658	674	4,651					$36,459
1835	12,564	1,587	5,447	$29,451	$2,991	$5.41	$5.96	$44,537
1836	20,074	3,245						$51,279
1837	4,805	1,250	6,186	$61,033	$9,181	$9.87	$11.35	$64,437
1838	3,414	602	7,130	$60,612	$14,171	$8.50	$10.49	$164,633
1839	4,976	618						$171,636
1840	2,236	118	8,273	$58,344	$12,504	$7.05	$8.56	$300,481
1841	1,164		10,188					$168,898
1842	1,129		13,646	$73,297	$12,482	$5.37	$6.28	$393,248
1843	1,605		14,675	$76,133	$12,399	$5.19	$6.03	$490,265

Notes:

Acres in thousands of acres, value in thousands of dollars, and value per acre in dollars.

Land Sales from Gates.

All other information from Annual Report of the Auditor of State, Indiana, various years. These numbers are taken from the totals reported by the State Auditor, they differ in minor respects from other totals reported in the paper which represent the sum of the county figures reported by the Auditor.

Total Taxes includes all revenues collected in each fiscal year.

Table 9
Regression of the Ratio of *Ad Valorem* taxes levied in 1835
to the Per Acre taxes levied in 1834
on County Characteristics
(Standard errors)

Internal Improvement	0.33 -0.15	---	---	---
Terminus	---	0.73 -0.18	---	---
Town Lands as Share of Total Value	---	---	2.45 -0.45	---
Latitude	---	---	---	0.2 -0.1
Intercept	0.78 -0.12	0.86 -0.07	0.71 -0.08	-7.08 -3.9
N	53	53	53	53
R2	0.09	0.24	0.36	0.08

Notes: Dependent variable in all regressions "Ratio of Taxes in 1835/1834," a continuous variable measuring the ratio of *ad valorem* taxes levied in 1835 to the per acre taxes levied in 1834.

All observations are county means or dummy variables.

"Internal Improvement" is a dummy variable equal to 1 if a county has a canal, railroad, or turnpike.

"Terminus" is a dummy variable equal to 1 if a county contains an intersection of a canal, railroad, turnpike, and/or river.

"Town Lands" is a continuous variable measuring the share of town lands in total value of all lands in 1835.

"Latitude" is the latitude of the center point of each county.

Table 10
Difference in Difference Estimates
Change in Average Land Value Per Acre
Indiana Counties

	1835 to 1837	1837 to 1842
All Counties	$3.90	-$4.21
Internal Improvement Counties	$4.55	-$5.49
Non-Internal Improvement Counties	$2.74	-$2.80
Difference	$1.81	-$2.69
N	60	75
Terminus Counties	$8.29	-$9.06
Non-Terminus Counties	$2.93	-$3.11
Difference	$5.36	-$5.95
N	60	75
High Tax Ratio Counties Ad valorem > 1.2 Per Acre	$4.91	-$5.38
Low Tax Counties Ad Valorem < .8 Per Acre	$2.99	-$2.14
Difference	$1.92	-$3.24
N	52	51

Notes:

Average land values per acre are calculated for land and improvements. They do no include town lots or personal property.

The number of observations in each cell varies. All differences are statistically significant at the 10 percent level or higher.

Table 11
Variable Means

Variable	Year	N	Mean	Standard Deviation
Total acreage taxed	1834	63	73,873	50,708
Total acreage taxed	1835	63	86,663	97,443
Total acreage taxed	1837	79	77,033	62,464
Total acreage taxed	1842	86	158,679	76,444
Value of Land & Improvements	1835	62	$479,086	$420,870
Value of Land & Improvements	1837	79	$772,601	$756,841
Value of Land & Improvements	1842	84	$867,064	$615,253
Value of Land Per Acre	1835	62	$5.82	$2.23
Value of Land Per Acre	1837	79	$9.37	$4.91
Value of Land Per Acre	1842	84	$5.17	$2.18
Change in value per acre	1835 to 1837	61	$3.90	$4.46
Change in value per acre	1837 to 1842	76	-$4.21	$4.28
Number of polls	1835	60	1,071	550
Number of polls	1837	82	1,016	626
Number of polls	1842	85	1,319	690
Latitude		92	39.84	1.07
Dummy Variables				
Terminus		92	0.15	0.36
Turnpike		92	0.39	0.49
Wabash and Erie Canal		92	0.22	0.41
Whitewater Canal		92	0.04	0.21
Central Canal				
Railroad				
Ohio River				

Table 12
States That Wrote New Constitutions
Or Amended Constitutions between 1842 and 1852,
And whether the changes affected Debt, Corporations, and Taxation.

Wrote New Constitutions		Debt	Corporations	Taxation
Rhode Island	1842	Y	Y	Y
New Jersey	1844	Y	Y	Y
Louisiana	1845	Y	Y	Y
	1851	Y	Y	Y
New York	1846	Y	Y	
Illinois	1848	Y	Y	Y
Kentucky	1850	Y	Y	
Michigan	1850	Y	Y	Y
Virginia	1850			Y
Indiana	1851	Y	Y	Y
Maryland	1851	Y	Y	Y
Ohio	1851	Y	Y	Y
Wrote First Constitution				
Iowa	1847	Y	Y	
	1857	Y	Y	
California	1849	Y	Y	Y
Wisconsin	1848	Y	Y	Y
Florida	1838		Y	Y
Amended Constitutions				
Arkansas	1846			
Pennsylvania	1857	Y		
Michigan	1843			

Source: see notes to Table 6. "Y" means that the state adopted some provisions regarding debt, corporations, or taxation. See appendix tables for specific features of the constitutions.

Table 13
Constitutional Restrictions on State Debts

New Const.		Procedural Restriction	Credit Not Loaned	Short Term Limit	Absolute Limit	Refer-enda	Time Limit	Ways and Means
Rhode Island	1842	Y		50,000	N	Y		
New Jersey	1844	Y	Y	100,000	N	Y	35	Y
Louisiana	1845	Y		100,000	N			Y
	1851	Y		100,000	8,000,000			Y
New York	1846	Y		1,000,000	N	Y	18	Direct Tax
Illinois	1848	Y		50,000		Y		Y
Kentucky	1850	Y	Y	500,000		Y	30	Y
Michigan	1843	Y				Y		
Michigan	1850	NO II	Y	50,000				
Virginia	1850		Y				34	
Indiana	1851	Prohibited		Prohibited				
Maryland	1851	Y	Y	100,000	100,000		15	Y
Ohio	1851	NO II	Y					

First Const.		Procedural Restriction	Credit Not Loaned	Short Term Limit	Absolute Limit	Refer-enda	Time Limit	Ways and Means
Iowa	1847	Y		100,000	N	Y	20	Y
	1857	Y	Y	250,000	N	Y	20	Direct Tax
California	1849	Y		300,000		Y	20	Y
Wisconsin	1848	Y		100,000			5	Y
Florida	1838	nothing						
Amended								
Pennsylvania	1857	Limited	Y	750,000				

Notes:
Constitutional provisions were taken from the text of the relevant constitutions. The texts are available online at Wallis, NBER/Maryland Constitution project or from Thorpe, *Constitutions*.

Procedural Restriction is Yes "Y" if state legislature cannot increase debt unilaterally.
"No II" if state cannot issue debt for internal improvements.
Credit Not Loaned is "Y" if state cannot loan credit to private individual or corporation.
Short Term Limit is the dollar limit on "casual debt"
Absolute Limit is limit of the total amount of debt outstanding, regardless of purpose.
Referenda is "Y" if voter approval is required for debt issue (aside from casual debt).
Time Limit is the maximum number of years bonds can be issued for.
Ways and Means is "Y" if a taxes must be provided to service the debt.
Direct Tax is "Y" if a property tax increase must be provided.
Single Object is "Y"s if legislation authorizing debt must be constrained to one object.
No Repeal is "Y" if the laws authorizing taxation cannot be repealed, are "irrepealable."

Table 14

State Constitutional Provisions with Regard to Corporations

New Constitutions		Investment Prohibited	General Laws	Special Prohibited	Special Absolute	Repeal o Revok
Rhode Island	1842	Y				
New Jersey	1844	Y (local)	Y	Y		
Louisiana	1845	Y	Y	Y		
	1851	Y*		Y, not Banks		
New York	1846		Y	Y	No No Banks	
Illinois	1848	In Banks	Y	Y	NO	
Kentucky	1850	Y				
Michigan	1850	Y	Y			
Virginia	1850					
Indiana	1851	Y (S & L)	Y	Y		
Maryland	1851		Y	Y	NO	Y
Ohio	1851	Y (S & L)	Y	Y	Y	Y

First Constitution		Investment Prohibited	General Laws	Special Prohibited	Special Absolute	Repeal o Revok
Iowa	1847	Y	Y	Y	Y	
	1857	Y	Y	Y	Y	Y
California	1849	Y	Y	N	Y	
Wisconsin	1848	Y	Y	Y	N	Y
Florida	1838	Y		N 2/3 majority		
Amended						
Pennsylvania	1838					Y
	1857	Y				Y

Notes:

The Louisiana constitution in 1851 allowed investment in Internal Improvement Companies up to 1/5 of their capital.

Investment Prohibited: State (Local) government prohibited from investing in corporations.
General Laws: Corporations can be created under General Incorporation Acts.
Special Prohibited: State cannot, under usual circumstances, create corporations by Special Act.
Special Absolute: State can never create corporations by Special Act.

Banks:
No - Banks Prohibited
General - Banks allowed under General Act only
General/Voters - Banks allowed only if voters approve a General Incorporation Act.
Deposit - In California the only banks allowed are deposit banks, no money creating banks.
6 months - In Pennsylvania, bank charters had a 6 month waiting period.

Table 15
State Constitutional Provisions with regard to Taxation

Wrote New Constitutions			Uniform Rules	Taxed By Value	Equal Rate
Rhode Island	1842				
New Jersey	1844		Y	Y	
Louisiana	1845		Y	Y	
	1851		Y	Y	
New York*	1846	nothing			
Illinois	1848		Y (local)	Y	
Kentucky	1850	nothing			
Michigan*	1850		Y	Y	Y
Virginia	1850		Y	Y	Y
Indiana	1851		Y	Y	Y
Maryland	1851			Y	
Ohio	1851		Y		
Wrote First Constitution					
Iowa	1847	nothing			
	1857	nothing			
California	1849		Y	Y	Y
Wisconsin	1848		Y		
Florida	1838		Y		Y
Other States					
Tennessee	1834		Y	Y	
Maine*	1819			Y	Y

Table 16
First Year of Corporation Provision, Sorted by Year of Corporation Provision

State	Year	1840s	1850s	1860s	1870s	1880s	1890s	1900s	1910s	1920s+
Louisiana	1845	X								
New York	1846	X								
Iowa	1846	X								
Wisconsin	1848	X								
Illinois	1848	X								
California	1849	X								
Michigan	1850		X							
Maryland	1851		X							
Ohio	1851		X							
Indiana	1851		X							
Oregon	1857		X							
Minnesota	1857		X							
Kansas	1859		X							
West Virginia	1863			X						
Nevada	1864			X						
Georgia	1865			X						
Missouri	1865			X						
Nebraska	1866			X						
Alabama	1867			X						
Arkansas	1868			X						
North Carolina	1868			X						
South Carolina	1868			X						
Tennessee	1870				X					
Pennsylvania	1874				X					
New Jersey	1875				X					
Colorado	1876				X					
Texas	1876				X					
Montana	1889					X				
North Dakota	1889					X				
Washington	1889					X				
South Dakota	1889					X				
Idaho	1889					X				
Wyoming	1889					X				
Mississippi	1890						X			
Kentucky	1891						X			
Rhode Island	1892						X			
Utah	1896						X			
Delaware	1897						X			
New Mexico	1911								X	
Arizona	1912								X	
Florida	1968									X
Connecticut	none									
Oklahoma	none									
Massachusetts	none									
New Hampshire	none									

Note: Row order is by first year of a corporation provision, column order is by first year of corporation provision.

Table 17

First Year of Municipal Provision, Sorted by Year of Municipal Provision

State	Statehood	First Municipal	1840s	1850	1860s	1870s	1880s	1890s	1900s	1910s	1920+
Wisconsin	1848	1848	X								
Indiana	1816	1851		X							
Ohio	1803	1851		X							
Iowa	1846	1857		X							
Kansas	1861	1859		X							
Florida	1845	1861			X						
Nevada	1864	1864			X						
Maryland	1788	1864			X						
Missouri	1821	1865			X						
Nebraska	1867	1866			X						
Arkansas	1836	1868			X						
Texas	1845	1869			X						
Illinois	1818	1870				X					
West Virginia	1863	1872				X					
New York	1788	1874				X					
Pennsylvania	1787	1874				X					
New Jersey	1787	1875				X					
Colorado	1876	1876				X					
California	1850	1879				X					
Minnesota	1858	1881					X				
Montana	1889	1889					X				
Idaho	1890	1889					X				
South Dakota	1889	1889					X				
North Dakota	1889	1889					X				
Washington	1889	1889					X				
Wyoming	1890	1889					X				
Mississippi	1817	1890						X			
Kentucky	1792	1891						X			
Utah	1896	1896						X			
South Carolina	1788	1896						X			
Alabama	1819	1901							X		
Oklahoma	1907	1907							X		
Michigan	1837	1909							X		
New Mexico	1912	1911								X	
Arizona	1912	1912								X	
North Carolina	1789	1916								X	
Rhode Island	1790	1951									X
Connecticut	1788	1965									X
New Hampshire	1788	1966									X
Louisiana	1812	1974									X
Tennessee	1796										
Massachusetts	1788										
Delaware	1787										
Georgia	1788										
Oregon	1859										

Note: Row order is by first year of a municipal provision, column order is by first year of municipal provision.

Table 18
First Year of General or Special Law Provision, Sorted by Year of General or Special Law Provision

State	Statehood	General Laws	1840s	1850	1860s	1870s	1880s	1890s	1900s	1910s	1920+
Michigan	1837	1850		X							
Indiana	1816	1851		X							
Iowa	1846	1857		X							
Oregon	1859	1857		X							
Kansas	1861	1859		X							
Alabama	1819	1861			X						
Maryland	1788	1864			X						
Nevada	1864	1864			X						
Georgia	1788	1865			X						
Missouri	1821	1865			X						
Florida	1845	1868			X						
Texas	1845	1869			X						
Tennessee	1796	1870				X					
Illinois	1818	1870				X					
Wisconsin	1848	1871				X					
West Virginia	1863	1872				X					
Arkansas	1836	1874				X					
Pennsylvania	1787	1874				X					
New York	1788	1874				X					
Nebraska	1867	1875				X					
New Jersey	1787	1875				X					
Colorado	1876	1876				X					
Louisiana	1812	1879				X					
California	1850	1879				X					
Minnesota	1858	1881					X				
South Dakota	1889	1889					X				
Wyoming	1890	1889					X				
Idaho	1890	1889					X				
Washington	1889	1889					X				
North Dakota	1889	1889					X				
Montana	1889	1889					X				
Mississippi	1817	1890						X			
Kentucky	1792	1891						X			
South Carolina	1788	1896						X			
Utah	1896	1896						X			
Oklahoma	1907	1907							X		
New Mexico	1912	1911								X	
Arizona	1912	1912								X	
North Carolina	1789	1916								X	
New Hampshire	1788										
Massachusetts	1788										
Ohio	1803										
Delaware	1787										
Rhode Island	1790										
Connecticut	1788										

Note: Row order is by first year of a general or special law provision, column order is by first year of general or special law provision. A special law prohibits special laws for specific actions and a general law mandates a general law for specific actions.

Table 19
Really Bad Things that Happened
1800 to 1865

	Bad things Happen			
	Blatant Political Manipulation (1)	Government Default (2)	Secede (3)	Civil War (4)
Connecticut				X
Massachusetts	X			X
New Hampshire				X
Rhode Island				X
Delaware				X
New Jersey	X			X
Pennsylvania	X	X		X
Maryland	X	X		X
New York	X			X
South Carolina	X		X	X
North Carolina	X		X	X
Virginia	X		X	X
Georgia	X		X	X
Louisiana	X	X	X	X
Mississippi	X	X	X	X
Alabama	X		X	X
Missouri	X		X	X
Arkansas	X	X	X	X
Florida	X	X	X	X
Kentucky	X			X
Tennessee	X		X	X
Ohio				X
Indiana	X	X		X
Illinois				X
Michigan				X

Table 20
Classic Institutions, General Law Institutions, and Really Bad Things that Happened
1865 to 1914
I = Present in 1865

	Classic Institutions		General law Institutions		Really Bad things Happen	
		Corporations	Municipal	General Provisions	Blatant Political Manipulation	Government Default
	(1)	(2)	(3)	(4)	(5)	(6)
Connecticut	I		1965			
Massachusetts	I					
New Hampshire	I		1966			
Rhode Island	I	1892	1951			
Delaware	I	1897	I			
New Jersey	I	I	1875	1875	X	
Pennsylvania	I	I	1874	1874		
Maryland	I	I	1864	1864		
New York	I	I	1874	1874		
South Carolina	I	1868	1896	1896		
North Carolina	I	1868	1916	1916		
Virginia	I	?	?	?		
Georgia	I	1865	1865	1865		
Louisiana	I	I	1974	1879		
Mississippi	I	1890	1890	1890		
Alabama	I	1867	1867	1901		
Missouri	I	1865	1865	1865		
Arkansas	I	1868	1868	1874		
Florida	I	1968	1861	1868		
Kentucky	I	1891	1891	1891		
Tennessee	I	1870	1870	1870		
Ohio	I	I	I	I		
Indiana	I	I	I	I		
Illinois		I	1870	1870		
Michigan	I	I	1909	I		

Appendix Table A1
Ratio of Taxes Paid under Per Acre and *Ad Valorem* taxes

County	Ratio 1835/34	Percent Town Lots	Terminus County
Martin	0.42	0.10	0
Scott	0.49	0.08	0
Pike	0.54	0.06	0
Daviess	0.58	0.12	1
Johnson	0.58	0.04	0
Bartholomew	0.60	0.00	0
Jennings	0.61	0.09	0
Harrison	0.61	0.07	0
Sullivan	0.62	0.07	0
Gibson	0.63	0.10	0
Randolph	0.65	0.03	0
Lawrence	0.67	0.06	0
Orange	0.68	0.12	0
Fountain	0.68	0.04	0
Rush	0.69	0.03	0
Owen	0.69	0.07	0
Jackson	0.70	0.06	0
Greene	0.70	0.11	0
Ripley	0.73	0.07	0
Knox	0.73	0.37	0
Hendricks	0.75	0.05	0
Clarke	0.75	0.13	0
Morgan	0.75	0.06	0
Warrick	0.76	0.11	0
Perry	0.80	0.09	0
Hamilton	0.83	0.06	0
Washington	0.83	0.14	0
Parke	0.87	0.07	0
Monroe	0.88	0.11	0
Marion	0.88	0.35	1
Shelby	0.88	0.04	0
Switzerland	0.91	0.10	0
Boone	0.92	0.07	0
Carroll	0.93	0.08	0
Vermilion	0.96	0.12	0
Clinton	0.97	0.06	0
Putnam	0.98	0.06	1
Vigo	0.99	0.26	1
Tippecanoe	1.10	0.18	1
Clay	1.12	0.09	0
Union	1.12	0.02	0
Madison	1.15	0.04	0

Henry	1.18	0.05	0
Hancock	1.20	0.10	0
Warren	1.21	0.03	0
Fayette	1.22	0.05	0
Delaware	1.23	0.06	0
Wayne	1.43	0.13	1
Dearborn	1.54	0.14	1
St. Joseph	1.62	0.08	1
Grant	1.67	0.07	0
Franklin	2.01	0.04	0
Cass	2.14	0.80	1
Jefferson	4.12	0.63	1

Notes:

Ratio 1835/34 is the ratio of taxes paid under the proposed *ad valorem* tax in 1835 to taxes paid by the county in 1834 under the per acre land tax. Both figures are taken from the Report of the State Auditor for 1834 and 1835.

The table only includes counties with complete information in the 1834 and 1835 reports.

Town Lots is the share of all land value reported as town lots in 1835.

Terminus equals 1 if the county contains the junction of two transportation lines.