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Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth-Century England

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The article studies the evolution of the constitutional arrangements in seventeenth-century England following the Glorious Revolution of 1688. It focuses on the relationship between institutions and the behavior of the government and interprets the institutional changes on the basis of the goals of the winners—secure property rights, protection of their wealth, and the elimination of confiscatory government. We argue that the new institutions allowed the government to commit credibly to upholding property rights. Their success was remarkable, as the evidence from capital markets shows.

This article focuses on the political factors underpinning economic growth and the development of markets—not simply the rules governing economic exchange, but also the institutions governing how these rules are enforced and how they may be changed. A critical political factor is the degree to which the regime or sovereign is committed to or bound by these rules. Rules the sovereign can readily revise differ significantly in their implications for performance from exactly the same rules when not subject to revision. The more likely it is that the sovereign will alter property rights for his or her own benefit, the lower the expected returns from investment and the lower in turn the incentive to invest. For economic growth to occur the sovereign or government must not merely establish the relevant set of rights, but must make a credible commitment to them.

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A ruler can establish such commitment in two ways. One is by setting a precedent of "responsible behavior," appearing to be committed to a set of rules that he or she will consistently enforce. The second is by being constrained to obey a set of rules that do not permit leeway for violating commitments. We have very seldom observed the former, in good part because the pressures and continual strain of fiscal necessity eventually led rulers to "irresponsible behavior" and the violation of agreements. The latter story is, however, the one we tell.

We attempt to explain the evolution of political institutions in seventeenth-century England, focusing on the fundamental institutions of representative government emerging out of the Glorious Revolution of 1688—a Parliament with a central role alongside the Crown and a judiciary independent of the Crown. In the early seventeenth century fiscal needs led to increased levels of "arbitrary" government, that is, to expropriation of wealth through redefinition of rights in the sovereign's favor. This led, ultimately, to civil war. Several failed experiments with alternative political institutions in turn ushered in the restoration of the monarchy in 1660. This too failed, resulting in the Glorious Revolution of 1688 and its fundamental redesign of the fiscal and governmental institutions.

To explain the changes following the Glorious Revolution we first characterize the problem that the designers of the new institutions sought to solve, namely, control over the exercise of arbitrary and confiscatory power by the Crown.[1] We then show how, given the means, motives, and behavior of the king during this century, the institutional changes altered the incentives of governmental actors in a manner desired by the winners of the Revolution. These changes reflected an explicit attempt to make credible the government's ability to honor its commitments. Explicit limits on the Crown's ability *unilaterally* to alter the terms of its agreements played a key role here, for after the Glorious Revolution the Crown had to obtain Parliamentary assent to changes in its agreements. As Parliament represented wealth holders, its increased role markedly reduced the king's ability to renege. Moreover, the institutional structure that evolved after 1688 did not provide incentives for Parliament to replace the Crown and itself engage in similar "irresponsible" behavior. As a consequence the new institutions produced a marked increase in the security of private rights.

As evidence in favor of our thesis, we study the remarkable changes in capital markets over this period. After the first few years of the Stuarts' reign, the Crown was not able systematically to raise funds. By

[1] Our discussion of the events prior to the Glorious Revolution (1603 to 1688) simply characterizes this period; it does not model or explain it. Moreover, since our history emphasizes the problems the winners (the Whigs) sought to solve, it necessarily contains strong elements of "Whig" history.

the second decade of the seventeenth century, under mounting fiscal pressure, the Crown resorted to a series of "forced loans," indicating that it could not raise funds at rates it was willing to pay. Following the Glorious Revolution, however, not only did the government become financially solvent, but it gained access to an unprecedented level of funds. In just nine years (from 1688 to 1697), government borrowing increased by more than an order of magnitude. This sharp change in the willingness of lenders to supply funds must reflect a substantial increase in the perceived commitment by the government to honor its agreements. The evidence shows that these expectations were borne out, and that this pattern extends well into the next century.

Since we focus on the evolution and impact of the political institutions, of necessity we slight the larger economic and religious context, even though in many specific instances these larger religious and economic issues were proximate sources of actions and policies that we describe. Indeed, no history of the seventeenth century is complete that does not describe both the growing markets and the evolving organizations that accompanied economic expansion as well as the persistent religious tensions, particularly between Catholic and Protestant. A more thorough study, one far too big for this essay, would attempt to integrate the change in opportunity costs of both the economic and *religious* actors as they intermingled with the immediate political issues on which we concentrate. But having said that, it is important to stress that our central thesis is a key part of the whole process by which an institutional framework evolved in England. We contend that while the English economy had been expanding and its markets growing, in order for economic development to continue the constraints described below had to be altered.

This essay proceeds as follows. Section I develops the importance of political institutions and the constitution and their relevance for the sections that follow. Sections II and III develop the narrative of the period, focusing respectively on England under the Stuarts and on the evolution of new institutions and secure rights following the Glorious Revolution. Section IV contains the central part of our analysis and reveals why these institutions made *credible* the government's commitment to honoring its agreements. Sections V and VI present our evidence from public and private capital markets.

I. THE ROLE OF POLITICAL INSTITUTIONS AND THE CONSTITUTION

The control of coercive power by the state for social ends has been a central dilemma throughout history. A critical role of the constitution and other political institutions is to place restrictions on the state or sovereign. These institutions in part determine whether the state produces rules and regulations that benefit a small elite and so provide little prospect for long-run growth, or whether it produces rules that foster long-term growth. Put simply, successful long-run economic performance requires appropriate incentives not only for economic actors but for political actors as well.

Because the state has a comparative advantage in coercion, what prevents it from using violence to extract all the surplus?[2] Clearly it is not always in the ruler's interests to use power arbitrarily or indiscriminately; by striking a bargain with constituents that provides them some security, the state can often increase its revenue. But this alone is insufficient to guarantee consistent behavior on the part of the ruler.

The literature on transactions costs and institutions emphasizes that while parties may have strong incentives to strike a bargain, their incentives after the fact are not always compatible with maintaining the agreement: compliance is always a potential problem. This literature also notes that when ex post problems are anticipated ex ante, parties will attempt to alter incentives, devising institutions or constitutions that promote compliance with bargains after the fact. Oliver Williamson says:

> Transactions that are subject to ex post opportunism will benefit if appropriate actions can be devised ex ante. Rather than reply to opportunism in kind, the wise [bargaining party] is one who seeks both to give and receive "credible commitments." Incentives may be realigned and/or superior governance structures within which to organize transactions may be devised.[3]

Problems of compliance can be reduced or eliminated when the institutions are carefully chosen so as to match the anticipated incentive problems. Under these circumstances, parties are more likely to enter into and maintain complex bargains that prevent abuse of political control by the state.

To succeed in this role, a constitution must arise from the bargaining context between the state and constituents such that its provisions carefully match the potential enforcement problems among the relevant parties. The constitution must be *self-enforcing* in the sense that the major parties to the bargain must have an incentive to abide by the bargain after it is made.[4]

[2] Throughout late medieval and early modern times, if rulers did not maintain a comparative advantage in coercion, they soon failed to be rulers. See William McNeill, *Pursuit of Power* (Chicago, 1983); Douglass North, *Structure and Change in Economic History* (New York, 1981); and Gordon Tullock, *Autocracy* (Dordrecht; 1987).

[3] Oliver Williamson, *Economic Institutions of Capitalism* (New York, 1985), pp. 48–49.

[4] Our formulation of the problem draws on the "new economics of organization." Application of this approach to political problems—and especially to the problem of providing institutions to enforce bargains over time—is just beginning. See, however, Barry R. Weingast and William Marshall, "The Industrial Organization of Congress; or Why Legislatures, Like Firms, Are Not Organized as Markets," *Journal of Political Economy*, 96 (Feb. 1988), pp. 132–63; and Terry Moe,

Consider a loan to a sovereign in which the ruler promises to return the principal along with interest at a specified date. What prevents the sovereign from simply ignoring the agreement and keeping the money? Reputation has long been noted as an important factor in limiting a sovereign's incentive to renege, and this approach has recently been formalized in the elegant models of modern game theory. The "long arm of the future" provides incentives to honor the loan agreement today so as to retain the opportunity for funds tomorrow. In many of the simple repeated games studied in the literature, this incentive alone is sufficient to prevent reneging.

Yet it is also well known that there are circumstances where this mechanism alone fails to prevent reneging.[5] In the context of current Third World debt, Jeremy Bullow and Kenneth Rogoff show that repeat play alone is insufficient to police reneging, and that more complex institutional arrangements are necessary. Similarly, in the medieval context, John Veitch has recently shown that medieval states had strong but not unambiguous incentives to develop reputations for honoring debt commitments, and that by and large they did so. Nonetheless, a series of major repudiations occurred when a second and typically more plentiful source of funds emerged. Edward I confiscated the wealth of the Jews in the late thirteenth century once the Italian merchants began operating on a larger scale; Phillip IV confiscated the wealth of the Templars under similar circumstances.

One important context in which repeat play alone is insufficient to police repudiation concerns variations in the sovereign's time preference or discount rate. States in early modern Europe were frequently at war. Since wars became increasingly expensive over the period, putting increasingly larger fiscal demands on the sovereign, the survival of the sovereign and regime was placed at risk. When survival was at stake, the sovereign would heavily discount the future, making the one-time gain of reneging more attractive relative to the future opportunities forgone. Indeed, there is a long history of reneging under the fiscal strain accompanying major wars.[6]

The insufficiency of repeat play and reputation to prevent reneging

"The New Economics of Organization," *American Journal of Political Science*, 28 (Aug. 1984), pp. 739–77.

[5] Paul R. Milgrom, Douglass C. North, and Barry R. Weingast, "The Role of Institutions in the Revival of Trade, Part I: The Medieval Law Merchant," Mimeo., Hoover Institution, Stanford University, 1989. Jeremy Bullow and Kenneth Rogoff, "A Constant Recontracting Model of Sovereign Debt," *Journal of Political Economy*, 97 (Feb. 1989), pp. 155–78; John M. Veitch, "Repudiations and Confiscations by the Medieval State" this JOURNAL, 46 (Mar. 1986), pp. 31–36.

[6] Joseph Schumpeter, "Fiscal Crises and the Tax State," in Richard A. Musgrave and Alan T. Peacock, eds., *Classics in the Theory of Public Finance* (London, 1962). John Hicks, *A Theory of Economic History* (Oxford, 1969). North, *Structure and Change*, and Veitch, "Repudiations and Confiscations." This is not to say that the sovereign will *never* honor commitments, only that he will not *always* do so.

provides for the role of political institutions. If the problem of variable discount rates is sufficiently important, individuals have an incentive to devise institutions to protect against reneging. It is important to observe that these institutions do not substitute for reputation-building and associated punishment strategies, but complement them.[7] Appropriately chosen institutions can improve the efficacy of the reputation mechanism by acting as a constraint in precisely those circumstances where reputation alone is insufficient to prevent reneging. The literature on the theory of the firm is replete with illustrations of how specific institutional features of the firm are necessary to mitigate an incentive problem that is insufficiently policed by reputation.[8]

This view provides an endogenous role for political institutions. Restrictions on the ex post behavior of the state improve the state's ability to maintain its part of bargains with constituents, for example, not to expropriate their wealth.[9] As we show below, this logic can be used to interpret the institutional changes at the time of the Glorious Revolution.

Our view also implies that the development of free markets must be accompanied by some credible restrictions on the state's ability to manipulate economic rules to the advantage of itself and its constituents. Successful economic performance, therefore, must be accompanied by institutions that limit economic intervention and allow private rights and markets to prevail in large segments of the economy. Put another way, because constitutional restrictions must be self-enforcing, they must serve to establish a credible commitment by the state to abide by them. Absolutist states which faced no such constraint, such as early modern Spain, created economic conditions that retarded long-run economic growth.

The ability of a government to commit to private rights and exchange is thus an essential condition for growth. It is also, as we shall see, a central issue in the constitutional debate in seventeenth-century England.

II. ENGLAND UNDER THE STUARTS: LIMITED CREDIBLE COMMITMENT TO RIGHTS

After the Crown passed from the Tudors to the Stuarts in 1603, revenue problems and their consequences become increasingly impor-

[7] Weingast and Marshall, "Industrial Organization of Congress"; Milgrom, North, and Weingast, "The Role of Institutions."

[8] Vertical integration is the standard example: because of potential transactions problems due to "asset specificity" or "appropriable quasi-rents," firms that internalize the problem via vertical integration outperform those which do not. See Williamson, *Economic Institutions*.

[9] In this sense our argument parallels that of James Buchanan and Geoffrey Brennan, who argue that the "recognition of the temporal dimensionality of choice provides one 'reason for rules'—rules that will impose binding constraints on choice options after the rules themselves have been established." James Buchanan and Geoffrey Brennan, *Reason of Rules* (Cambridge, 1981), p. 67.

TABLE 1
REVENUE SOURCES AND EXPENDITURE LEVELS, 1617

Revenue Source	Amount (£/year)
Crown Lands	£80,000
Customs and "new impositions"	190,000
Wards, and so forth (besides purveyance)	180,000
Total Revenue	450,000
Total Expenditures	486,000
Deficit	36,000

Source: David Hume, *The History of England* (Indianapolis, 1983), appendix to "The Reign of James I."

tant. At this time the king was expected to "live on his own," that is, to fund the government in the manner of an extended household. The execution of public laws and expenditures was not subject to a public budgetary process, and Parliament played only a small role in the decisions over expenditure and investment. The Crown therefore had considerable discretionary power over how and on what the money was spent. Parliament's main source of influence over policy resulted from its power to provide the Crown with tax revenue, typically for extraordinary purposes such as various wars. Parliament was also responsible for granting the Crown its revenue from other sources, such as customs, but in practice, the Stuarts, particularly Charles I, continued to collect the revenue without parliamentary consent.

Throughout the Stuart period revenue from traditional sources did not match expenditures. While figures for government expenditures during the Stuart period have not been collected as systematically as for the period following the Glorious Revolution, the following picture emerges.

At the beginning of the Stuarts' reign, Crown lands produced roughly half the annual revenue. To make up annual shortfalls, the Crown regularly resorted to sale of these lands.[10] Following the war with Spain in 1588, Elizabeth had sold 25 percent of the lands, raising £750,000. Still, James I inherited sizable debts from Elizabeth's war. Over his reign (1603–1624), another 25 percent of Crown lands were sold, and the remainder went during the reign of his son, Charles I (1625–1641). Sale of a major portion of a revenue-producing asset for annual expenses indicates the revenue problem was endemic. It also implies that over time the revenue problem had to get worse, for with every sale the expected future revenue declined. And, indeed, as Table 1 shows, for

[10] See, for example, Derek Hirst, *Authority and Conflict: England, 1603–1658* (Cambridge, MA, 1986), chap. 4, and Lawrence Stone, *The Crisis of the Aristocracy, 1558–1641* (Oxford, 1965).

the year 1617 total revenue did not match expenditures, leaving a deficit of £36,000 or of just under 10 percent of expenditures.

Under the Stuarts, therefore, the search for new sources of revenue became a major priority. An important new source which produced conflict between the Crown and Parliament was the raising of customs revenues through new "impositions." Indeed, in the 1630s such increases almost brought financial solvency, and with it the ability of the Crown to survive without calling Parliament.

Another method used by the Crown to raise revenue was to demand loans. The Crown did not, however, develop a systematic, regular relationship with moneyed interests, negotiating a series of loans in which it honored today's agreements because it wanted to avail itself of future loan opportunities. Indeed, just the opposite occurred. The Stuarts secured most of their loans under threat; hence they are known as "forced loans," of which more later. Repayment was highly unpredictable and never on the terms of the original agreement. In the forced loan of 1604/5 the Crown borrowed £111,891, nominally for one year; "although . . . ultimately repaid, £20,363 . . . was still due as late as December 1609."[11] The forced loan of 1617 (just under £100,000) was not repaid until 1628. The Crown behaved similarly on loans from 1611 and 1625. As time went on, such loans came to look more and more like taxes, but because these were nominally loans the Crown did not need parliamentary assent.[12]

The Crown's inability to honor its contractual agreements for borrowed funds is a visible indicator of its readiness to alter the rights of private parties in its own favor. Despite the significant incentive provided by the desire to raise funds in the future, the Crown followed its short-run interests, reneging on the terms to which it had agreed. As noted above, this type of behavior was not unique to England.

A second revenue-raising method was the sale of monopolies. While not the most important source of new revenue, it is particularly instructive because of its economic consequences.[13] In order to raise revenue in this manner, the Crown used patents in a new way. Originally designed to protect and promote the invention of new processes, patents came to be used to "reduce settled industries to monopolies under cover of technical improvements."[14] From a revenue standpoint, the best sources of new monopoly rights involved an

[11] Robert Ashton, *The Crown and the Money Market, 1603–1640* (Oxford, 1960), p. 35.

[12] Ashton, *Crown and the Money Market*, p. 36. Richard Cust, in his recent study of the 1626 forced loan, provides several instances of sanctions imposed on individuals refusing to provide funds: leading refusers were "either committed to prison or pressed in readiness for service abroad." Richard Cust, *The Forced Loans and English Politics* (Oxford, 1987), p. 3.

[13] Robert B. Ekelund, and Robert D. Tollison, *Mercantilism as a Rent-Seeking Society* (College Station, 1981).

[14] W. Price, *English Patents of Monopoly* (Boston, 1906). Examples include soap, tobacco, and starch.

economic activity that was profitable and whose participants were not part of the king's constituency. This led to a systematic search for and expropriation of quasi-rents in the economy. Moreover, as we will see in the next section, the Crown utilized a different system for enforcing these grants than that used for the older mercantilist controls, and one that was considerably more responsive to the Crown's interests. The system involved circumventing existing rights and the institutions designed to protect these rights.

Grants of monopoly clearly disrupted both existing economic interests in the targeted activity and those who depended on it (for example, suppliers and consumers). Monopoly grants thus acted as a tax that, since it expropriated the value of existing investment as well as future profits, was considerably greater at the margin than a 100 percent tax on profits. This risk lowered the rewards from all such new investments and hence discouraged their undertaking.

Beyond grants of monopoly, James, and especially Charles, used a variety of other, more subtle forms of expropriation of wealth. Because so many dimensions of public policy were involved, the political risk to citizens increased substantially over previous times. One important example was expansion of the peerage by the Crown, again in exchange for revenue.[15] While this expansion had broad social, cultural, and ideological implications, it also had significantly negative effects on existing peers. Expansion of the size of the House of Lords altered the value of an existing seat since it limited the ability of existing lords to protect themselves against the Crown.[16] Between the coronation of James I and the outbreak of the Civil War, the Stuarts' sale of peerages doubled the number of lay peers.

Governmental power was used in other ways to raise revenue. Employing the ancient power of purveyance, agents of the Crown seized various goods for "public purposes," paying prices well below market. Purveyance brought in an annual "unvoted" tax of £40,000 in the 1620s.[17] James also put hereditary titles up for sale: for example, offering to sell the title of baronet for £1,095 and promising that only a fixed number would be sold. This brought in £90,000 by 1614. But James soon reneged on this, lowering the price and selling more than the promised number. By 1622 the price had fallen to £220.[18] Through the

[15] F. W. Maitland, *Constitutional History of England* (Cambridge, 1908); Wallace Notestein, *The Winning of the Initiative by the House of Commons* (London, 1924); and Stone, *Crisis of the Aristocracy*.

[16] There were two separate reasons for this: the total number of voters was increasing, and the expansion added new members whose views systematically differed from those of existing nobles. The exchange that brought new nobles to the Lords undoubtedly entailed a commitment of support for the king.

[17] Hirst, *Authority and Conflict*, p. 103; and C. Hill, *Century of Revolution, 1603–1714* (2nd edn., New York, 1980), chap 4. See also John Kenyon, *Stuart England* (2nd edn., New York, 1985).

[18] Hirst, *Authority and Conflict*, pp. 113–14.

court of wards, the Crown managed the estates which had passed to minors. These were often openly run for the advantage of the Crown, not infrequently extracting the full value of the estate.[19] The Crown put "dispensations" up for sale, that is, the use of its powers to allow specific individuals to dispense with a specific law or restriction. "Sale" of this power was often used in conjunction with the enforcement or threat of enforcement of regulations that had not been enforced for years. At times the Crown simply seized the property of citizens. An especially egregious example occurred in 1640 when "the government seized £130,000 of bullion which private merchants had placed in the Tower for safety, causing numerous bankruptcies."[20]

This clash of interests between the king on the one hand and wealth holders and tax payers on the other was a major reason why the Crown failed to obtain grants from Parliament. In exchange for grants, Parliament demanded conditions and limits on the king's power that he was unwilling to accept. Parliamentary interests thereby exacerbated the problem they were attempting to eliminate. Withholding funds worsened the Crown's fiscal problems and intensified its search for alternative sources of revenue.

Institutional Basis of Stuart Policymaking

Both Parliament and the common law courts fought the Crown's use of monopolies and other changes in rights in its search for revenue. Parliament regularly presented the king with "grievances," lists of problems caused by the king that it wanted addressed.[21] Grievances were part of a larger bargaining process in which Parliament attempted, in exchange for revenue, to limit the Crown's power and its use of policymaking to expropriate wealth. Because of ever-present revenue problems, the Stuarts often called on Parliament for additional revenue. Parliamentary interests regularly demanded that in exchange for revenue the Crown respect traditional property rights and institutions: for example, that it cease declaring new monopolies. The Crown, in turn, was evidently unwilling to accept these restrictions and hence Parliament was often dissolved without having come to an agreement with the Crown.[22]

Attempts were also made to prevent the Crown's using the law to further its objectives. In 1624 Parliament passed the much-noted Statute

[19] Ibid., p. 103.

[20] C. Hill, *Century of Revolution*, p. 103.

[21] For details, see Notestein, *The Winning of the Initiative*.

[22] Part of the Crown's motivation appears to have been a desire to move toward the absolutism prevalent on the continent, notably in France and Spain. As Kenyon observes, at the onset of the seventeenth century, "any further adjustments [in the balance of power between Parliament and the Crown] were likely to be at the expense of Parliament" (Kenyon, *Stuart England*, p. 43). It almost succeeded. Hirst describes debates in Parliament in which the participants were explicitly concerned with this possibility (Hirst, *Authority and Conflict*, chap. 3).

of Monopolies prohibiting the use of patents to grant monopolies to existing businesses in exchange for revenue. In this manner it attempted to assert the traditional rights of secure property. In addition common law courts handed down the famous "Case of Monopolies" in 1601, making the Crown's use of monopolies illegal in common law. The Crown, however, was able to evade these restrictions. While these evasions often took forms of questionable legality, so long as the Crown did not depend on Parliament for revenue, it was able to use them in practice.

Understanding the subsequent institutional reaction to these royal policies requires that we study the institutional means by which the Crown ran the government. For our purposes three elements of the royal powers and institutions were central to the Crown's success. First, a major source of power for the Crown was the royal prerogative, by which the Crown issued proclamations or royal ordinances. By this means it could issue new rules; that is, it had quasi-legislative powers without recourse to Parliament. Crown rules were enforced, not through the common law court system, but through the prerogative courts and included the power to suspend laws and to dispense with laws for specific individuals.[23]

Second, the Star Chamber, combining legislative, executive, and judicial powers, played a key role. On issues concerning prerogative, the Star Chamber had come to have final say, and could in certain circumstances reverse judgments against the Crown.[24]

Finally, since the Crown was personally responsible for day-to-day government operations, it paid the judges, who served at its pleasure. Increasingly the Stuarts used their power over judges to influence their judgments. Judges—Chief Justices Coke (1616/17) and Crew (1627)—were openly fired for ruling against the Crown. Ultimately this tactic produced judges who by and large supported the Crown.[25]

The effect of these institutions was to combine in the Crown executive, legislative, and judicial powers, limiting external institutional checks. While royal proclamations did not have the same legal status as an act of Parliament, they were enforced directly through the common law courts. While these courts did not have to go along with the king—and often did not—ultimately he won through the higher court, the Star Chamber. Thus, while the common law was often against the

[23] Dispensations for individuals, like most powers under the Stuarts, were put up for sale (Maitland, *Constitutional History*, pt. IV).

[24] The Star Chamber, in which the most egregious examples of arbitrary power occurred, became a regular feature of Stuart England. See Maitland, *Constitutional History*, and Friedrich A. Hayek, *Constitution of Liberty* (Chicago, 1960), chap. 11.

[25] Coke's dismissal, "the first of a judge in over thirty years, ushered in a period of increasing royal pressure on the bench: in Charles's reign two other chief justices, Crew and Heath, and one chief baron of the exchequer court, Walter, were to follow Coke" (Hirst, *Authority and Conflict*, p. 121). See also Hayek's excellent and extensive discussion, in *Constitution of Liberty*, chap. 11.

king, the king could alter the jurisdiction of a dispute by issuing proclamations. The expanded use of the Star Chamber and the successful running of the government for substantial periods without Parliament limited the ability of traditional institutions to constrain the Crown. Effective possession of legislative and judicial powers also gave the Crown the ability to alter economic and political rights when it was convenient to do so. In comparison with the previous century, the rights that Parliament and other institutions were designed to protect were considerably less secure.

In response, a coalition formed against the Crown, seeking to preserve personal liberties, rights, and wealth. This raised the stakes of the political game to the various economic interests—in particular the value of opposing the king rose. Moreover, because the Crown attempted to extract from its own constituents a major portion of the advantages it had bestowed on them, the value of supporting the king declined. It is clear, however, that the opposition would have been unlikely to succeed, had the English Crown, like its French or Spanish counterpart, had a standing army with which to quell the initial uprising.

Civil War to Glorious Revolution

Eventually the opposition openly challenged the king, leading the country into civil war. But the ultimate opposition victory was not inevitable.

After seizing power, the opposition modified the institutions underpinning the Crown's most egregious behavior. Not surprisingly, the Star Chamber was abolished in 1641 by an act requiring that all cases involving property be tried at common law, thus adding another milestone along the route toward supremacy of the common law, so favorable to property rights. Restrictions against monopolies were now enforced. In an attempt to prevent the Crown from ruling for substantial periods without calling a Parliament, Parliament passed the Triennial legislation, which called for regular standing of the Parliament. The royal administrative apparatus was dismantled, and with it the royal ability to impose regulatory restrictions on the economy in conflict with the rights enforced by the common law courts.

Important changes reduced restrictions on labor mobility. Land tenure modifications simultaneously favored the development of private rights and markets and reduced the Crown's political hold over this once-important part of its constituency.[26] New and profitable opportunities resulted from lifting restrictions on land use and improving markets.

[26] See H. J. Perkins, "The Social Causes of the British Industrial Revolution," *Transactions of the Royal Historical Society*, 18 (1968). Hill, discussing the 1660 Act confirming the abolition of feudal tenures, notes that in the eighteenth century Blackstone called this Act a greater boon to property owners than the Magna Carta itself (*Century of Revolution*, p. 127).

After the Civil War a number of political innovations occurred, including the abolition of the monarchy and the House of Lords. Their failure led to pressure to bring back the king. With the Restoration of the monarchy in 1660, England was once again ruled by the Stuarts. It is critical for understanding the next series of events to notice a striking limitation of the institutional changes prior to the Restoration. While the details differ considerably, the next twenty-five years repeated the events of the earlier Stuarts' reign in one important respect. Political struggle with constituents resulted in the king's arbitrary encroachment. By far the most important instance of this—indeed, the one resulting in a nation united against the Crown—concerned the rechartering of local governments and political power. Rechartering came in reaction to the Whig-led "Exclusion Crisis"; it allowed the Crown to disenfranchise much of the opposition and thereby reduce impediments to its exercise of power. Of the 104 members of Parliament returned in the mid-1680s by the boroughs receiving new charters, only one Whig was elected. This converted "what had been a formidable, aggressive and highly organized opposition party into an impotent collection of a few individuals."[27]

Had the Crown succeeded in this political maneuver, there would be few checks on its powers, because it allowed the Crown to disenfranchise *any* opposition. But between 1686 and 1688, James II, having disenfranchised the Whig opposition, turned on his own supporters, causing his own constituents to join the opposition to remove him in the Glorious Revolution of 1688.

III. INSTITUTIONAL CHANGES FOLLOWING THE GLORIOUS REVOLUTION

At the same time it extended the Crown to William and Mary, Parliament restructured the society's political institutions in the Revolution Settlement. To understand the new institutions it is necessary to see clearly the problem the parliamentary interests sought to solve. The early Stuarts' use of the Star Chamber and the rechartering of the later Stuarts threatened the liberties and wealth of citizens, leaving them with little protection against Crown attempts to appropriate their wealth. But experience showed that simply removing the powers underpinning arbitrary behavior was insufficient to prevent abuse. Controlling Crown behavior required the solving of financial problems as well as appropriate constraints on the Crown. So the Glorious Revolution also ushered in a fiscal revolution.[28] The main features of the institutional revolution are as follows.

[27] Jones, *Revolution of 1688*, pp. 47, 50. As B. W. Hill observes, James's efforts to repack the constituencies "came near to success in every respect but one: they alarmed landed society, Tory as well as Whig." See B. W. Hill, *The Growth of Parliamentary Parties: 1689–1742* (Hamden, 1976).

[28] P. G. M. Dickson, *The Financial Revolution in England* (New York, 1967).

First and foremost, the Revolution initiated the era of parliamentary "supremacy." This settled for the near future the issue of sovereignty: it was now the "king in Parliament," not the king alone.[29] No longer would the Crown, arguing the "divine rights of kings," claim to be above the law. Parliamentary supremacy established a permanent role for Parliament in the on-going management of the government and hence placed a direct check on the Crown. The Crown no longer called or disbanded Parliament at its discretion alone.

Parliament also gained a central role in financial matters. Its exclusive authority to raise new taxes was firmly reestablished; at the same time the Crown's independent sources of revenue were also limited. For the Crown to achieve its own goals this meant it had to establish successful relations with Parliament. Shortly thereafter, Parliament gained the never-before-held right to audit how the government had expended its funds. Parliamentary veto over expenditures, combined with the right to monitor how the funds they had voted were spent, placed important constraints over the Crown.

Another important institutional change focused on the royal prerogative powers. These were substantially curtailed and subordinated to common law, and the prerogative courts (which allowed the Crown to enforce its proclamations) were abolished. At the same time the independence of the judiciary from the Crown was assured. Judges now served subject to good behavior (they could only be removed if convicted for a criminal offense or by action of both houses of Parliament) instead of at the king's pleasure. The supremacy of the common law courts, so favorable to private rights, was thereby assured.

Because the Stuarts had violated the personal liberties of their opponents (excessive bail, no writ of Habeas Corpus) as a means of raising the cost of opposition, reducing the arbitrary powers of the Crown resulted not only in more secure economic liberties and property rights, but in political liberties and rights as well. Political rights were seen as a key element of protection against arbitrary violations of economic rights.

Two final points are worth emphasizing. First, part of the glue that held these institutional changes together was the successful dethroning of Charles I and, later, James II. This established a credible threat to the Crown regarding future irresponsible behavior. The conditions which would "trigger" this threat were laid out in the Revolution Settlement, and shortly thereafter in the Declaration of Rights. Second, although parliamentary supremacy meant that Parliament dictated the form of the new political institutions, it did not assume the sole position of power within the government, as it did after the Civil War or in the nineteenth

[29] See, for example, Maitland, *Constitutional History*, pp. 298–301, or David Keir, *The Constitutional History of Modern Britain Since 1485* (London, 1966).

century. While substantial constraints were placed on the king, these did not reduce him to a figurehead.

IV. THE GLORIOUS REVOLUTION AND ENGLAND'S CREDIBLE COMMITMENT TO SECURE RIGHTS

The institutional innovations increased dramatically the control of wealth holders over the government. Since fiscal crises inevitably produced pressure on the Crown to break its agreements, eliminating unilateral control by the Crown over key decisions was a necessary component of the new institutions. As previously described, this occurred in two ways. First, by requiring Parliament's assent to major changes in policies (such as changing the terms of loans or taxes), the representatives of wealth holders could veto such moves unless they were also in their interest. This allowed action in times of crisis but eliminated the Crown's unilateral action. Second, several other ways for the Crown to renege on promises were eliminated, notably its ability to legislate unilaterally (through the prerogative), to by-pass Parliament (because it had an independent source of funds), or to fire judges who did not conform to Crown desires.

Two factors made the new arrangements self-enforcing. First, the credible threat of removal limited the Crown's ability to ignore the new arrangements. Second, in exchange for the greater say in government, parliamentary interests agreed to put the government on a sound financial footing, that is, they agreed to provide sufficient tax revenue. Not only did this remove a major motive underlying the exercise of arbitrary power, but for the new King William it meant he could launch a major war against France. The arrangement proved so satisfactory for the king that a host of precedents were set putting the new division of powers on a solid footing. As a consequence of these institutional changes, private rights became fundamentally more secure.[30]

Institutional and Political Constraints on Parliament

The triumph of Parliament raises the issue of why it would not then proceed to act just like the king? Its motives were no more lofty than those of the Crown. But the institutional outcome effectively deterred Parliament from similar behavior. Robert Ekelund and Robert Tollison provide the following general analysis:

> Higher costs due to uncertainty and growing private returns reduced industry demands for regulation and control in England. All this strengthened the emergent constitutional democracy, which created conditions making rent-seeking activity on the part of both

[30] Jones, on p. 6 of the *Revolution of 1688*, concludes: "None of its architects could have predicted its effectiveness in securing the liberties, religion, property and independence of the nation after so many previous attempts had failed."

monarch and merchants more costly. When the locus of power to rent-seeking shifted from the monarch to Parliament . . . the costs of supply of regulation through legislative enactment rose.[31]

They suggest that the natural diversity of views in a legislature raises the cost of supplying private benefits in the form of favorable regulation.

The framework of institutional evolution we have described complements their story. The embedding of economic and political freedoms in the law, the interests of principals (for example, merchants) in a greater measure of freedom, and the ideological considerations that swept England in the late seventeenth century combined to play a role in institutional change. The new constitutional settlement endowed several actors with veto power, and thus created the beginnings of a division or separation of powers.[32] Supplying private benefits at public expense now required the cooperation of the Crown, Parliament, and the courts. Only the Crown could propose an expenditure, but only Parliament could authorize and appropriate funds for the proposal, and it could do so solely for purposes proposed by the Crown. Erskin May summed up this procedure as, "The crown demands, the Commons grants, and the Lords assent to the grant." A balance of power between the Crown and Parliament significantly limited publicly supplied private benefits.[33]

Three other political factors help explain why the new era of parliamentary supremacy did not simply transfer power from the Crown to Parliament. In 1641 the centralized administrative apparatus which enforced royal attempts to alter rights and property was destroyed. The absence of such a structure prevented either the Crown or Parliament from similar encroachment. Because a new apparatus—even one that was initially quite limited—would allow its future expansion, many interests could be counted upon to oppose its initiation.

Second, the commercially minded ruling Whig coalition preferred limited government and especially limited political interference with the common law courts. Parliament was thus *politically* constrained from intervention in the courts. As R. Braun observes:

the Whig oligarchy was anxious to avoid encroachment upon the privacy of the business of those groups from which it drew its support. Not only the constitutional and institutional framework, but also the prevailing ideological basis of the [Whigs and their

[31] Ekelund and Tollison, *Mercantilism*, p. 149.

[32] We emphasize, however, that this division of powers was not a clear-cut system of checks and balances. Nor can it be considered a true separation of powers. The designers of the new institutions were far more worried about constraints on the Crown than on protecting the Crown from encroachments by Parliament. Thus in the latter half of the eighteenth century, the power of the Crown diminished, and with it the constraints (or checks) on Parliament. See A. F. Pollard, *The Evolution of Parliament* (London, 1926).

[33] Erskin May, *Parliamentary Practice* (17th edn., London, 1966; 1st edn., 1844). Further investigation of the procedures devised at this time is called for.

constituents] prevented the central administrative apparatus of the British government from developing [a major regulatory and control function].[34]

Widespread regulation of markets by Parliament along the line of Colbert in France (or the Stuarts) would have led to a clash with the common law courts. Thus the political independence of the courts limited potential abuses by Parliament. Combined with the explicit institutional limits on Crown intervention, this assured the courts important and unchallenged authority in large areas of economic activity.

Third, the creation of a politically independent judiciary greatly expanded the government's ability credibly to promise to honor its agreements, that is, to bond itself. By limiting the ability of the government to renege on its agreements, the courts played a central role in assuring a commitment to secure rights. As we will see, this commitment substantially improved the government's ability to raise money through loans.

Thus the institutional and political changes accompanying the Glorious Revolution significantly raised the predictability of the government. By putting the government on a sound financial basis and regularizing taxation, it removed the random component of expropriation associated with royal attempts to garner revenue. Any interest group seeking private gain had now to get approval from both the Crown and the Parliament.

V. THE FISCAL REVOLUTION

To see the profound effects of the Glorious Revolution, we focus on one important element of public finance, government borrowing. Since capital markets are especially sensitive to the security of property rights, they provide a unique and highly visible indicator of the economic and political revolution that took place. Indeed, they are one of the few means for empirically evaluating the effects of the Glorious Revolution.

Prior to the Glorious Revolution, payments on loans were subject to manipulation by the Crown; rescheduling and delays in payments were common. As indicated in Table 2, money was raised through forced loans in 1604/5, 1611/2, 1617, and 1625. In each instance the Crown did not honor its terms. In the loan of 1617, for example, James I raised £100,000 in London at 10 percent for the period of one year. At the end of the year, although James paid the interest, he refused to repay the principal and demanded that the loan be renewed. No interest was paid over the next several years, and each year another renewal was

[34] R. Braun, "Taxation, Sociopolitical Structure, and State-Building: Great Britain and Brandenburg-Prussia," in Charles Tilly, ed., *Formation of Nation States in Western Europe* (Princeton, 1975).

TABLE 2
FORCED LOANS BY THE EARLY STUARTS, 1603–1625

Year	Amount	Rate (percent per year)	Repayment
1604/5	£111,891	10%	£20,362 unpaid as of Dec. 1609
1611/2	116,381	10	£112,000 unpaid as of Jul. 1616
1617[a]	96,466	10[b]	Unpaid until 1628
1625[c]	60,000	8	Unpaid until 1628

[a] Extension in 1624 secured by Crown lands.
[b] Unilaterally lowered by Charles I in 1624 to 8%.
[c] Secured by Crown lands.
Source: Robert Ashton, *The Crown and the Money Market, 1603–1640* (Oxford, 1960), chaps. 2 and 5.

"agreed" to. In 1624 Charles I lowered the interest rate to 8 percent; however, he did not pay any interest, nor did he repay the principal until 1628. Such behavior was hardly designed to gain the confidence of potential sources of loans. As Robert Ashton concludes, the "cavalier treatment which the Crown meted out to its creditors, and more especially to those most unwilling lenders who made more or less compulsory contributions through the medium of the Corporation of London" helps explain why London and the money interests supported the parliamentary cause.[35] Nor did the Stuarts attempt to develop a major international source of loans.[36]

Several financial innovations occurred under the late Stuarts, including some that were to play a key role in the "financial revolution" after 1688, for example, making notes "assignable," thus allowing them to be sold. The recent work of Glenn Nichols suggests that financial arrangements under the late Stuarts were far superior to those under the early Stuarts. Nonetheless, fiscal stress pressed the system to its limits, and led to a partial repudiation in the famous "stop the exchequer" in 1672. The debt in question, over a million pounds, shows that the late Stuarts—until that time, at least—could raise substantial sums.[37]

Institutional Innovations

A series of institutional innovations during the war with France (1689–1697) changed the way the government sought credit, facilitating the regularization of public finance. First, the government began as a

[35] Ashton, *Crown and the Money Market*, p. 113.

[36] Ashton reports only two such loans, the second of which (£58,400 in 1616) was still outstanding in 1636. Here too the Stuarts failed to develop a reputation for honoring agreements. By the 1630s the Crown was unable to borrow at all from either international sources or London.

[37] See Glenn O. Nichols, "English Government Borrowing Before the Financial Revolution," manuscript, Anderson College, 1988. For details about the stop of the exchequer, see Dickson, *Financial Revolution*. In exchange for its short-term notes, the Crown gave new long-term loans. Much of the interest from the latter was still unpaid at the time of the Glorious Revolution, however.

regular practice to earmark new taxes, authorized by statute for each new loan issue, to pay the interest on all new long-term loans. By earmarking taxes beforehand, parliamentary interests limited the king's discretion each year over whether to pay bondholders their interest.

Second, the first large, long-term loan (£1,000,000) secured by new taxes took place in 1693. By 1694, however, these funds were exhausted. When the government sought a new large loan, it invited the subscribers to incorporate as the Bank of England. The Bank was responsible for handling the loan accounts of the government and for assuring the continuity of promised distributions. Certain restrictions were also imposed: the Bank could not lend the Crown money or purchase any Crown lands without the explicit consent of Parliament. As Macaulay observed over a century ago, this created a strong instrument of the Whig party (and hence of commercial interests). Since loans to the Crown went through the Bank, "it must have instantly stopped payment if it had ceased to receive the interest on the sum which it had advanced to the government."[38] The government had thus created an additional, private constraint on its future behavior by making it difficult to utilize funds of a current loan if it failed to honor its previous obligations.

Two other changes are worth noting. In 1698 the government created a separate fund to make up deficiencies in the event that the revenue earmarked for specific loans was insufficient to cover the required distributions (as was the case for several loans). This explicitly removed the component of risk associated with each loan due to its ties to a specific tax.[39] Second, during this period the milling of coins began, reducing the debasement of the currency due to shaving of coins.

Government Loans, 1688–1740

Thus were the institutional foundations of modern capital markets laid in England. These institutional changes were more successful than their originators had hoped. The original subscription to the Bank of England, for instance, was expected to be slow and possibly unsuccessful. In actuality, one-third of the loan was subscribed on the first day and another third during the next two days. Ten days later the loan was fully subscribed.

To see the dramatic results of the fiscal revolution, we turn to the public finances during this period. Table 3 provides information on governmental expenditures and debt. On the eve of the Revolution governmental expenditures were about £1.8 million, reflecting a slow

[38] Lord Macaulay, *The History of England*, (London, 1914), vol. V, p. 2438.

[39] As David Ogg explains: "Thenceforth, the investor knew that, in lending money on a specified tax, he had parliamentary guarantee for the security of this investment, based not only on the particular fund, but on the whole of the national revenue." David Ogg, *England in the Reigns of James II and William III* (Oxford, 1955), p. 413. Regarding the second, see pp. 422–25.

TABLE 3
GROWTH OF GOVERNMENT DEBT, 1618–1740
(£ million)

Year	Governmental Expenditure[1]	Debt[2]	Prices[3] (1701 = 100)
Stuart England			
1618[4]	£0.5	£0.8	
mid-1630s[5]	1.0	1.0	
1680[6]	1.4		113
1688[6]	1.8	1.0[7]	99
Post Glorious Revolution			
1695	6.2	8.4	116
1697	7.9	16.7	122
1700	3.2	14.2	115
1710	9.8	21.4	122
1714	6.2	36.2	103
1720	6.0	54.0	102
1730	5.6	51.4	95
1740	6.2	47.4	100
1750	7.2	78.0	95

Note: Because these figures are obtained from a variety of sources, they are intended solely to provide an indication of underlying trends. Figures for expenditures and debt after the Glorious Revolution are most reliable.

Sources: 1. Government Expenditure, post-1688: B. R. Mitchell, *British Historical Statistics* (Cambridge, 1988), chap. 11, table 2.
2. Debt, post-1688: Mitchell, *British Historical Statistics,* chap. 11, table 7.
3. Prices: Mitchell, *British Historical Statistics*, chap. 14: 1680–97, table 1, part A, "consumer goods"; 1697–1750, part B, "consumer goods."
4. Government Expenditure and Debt, 1618: David Hume, *The History of England* (Indianapolis, 1983), "Appendix to the Reign of James I."
5. Government Expenditure and Debt, mid-1630s: Derek Hirst, *Authority and Conflict: England, 1603–1658* (Cambridge, MA, 1986), p. 174.
6. Government Expenditure, 1680 and 1688: C. D. Chandaman, *The English Public Revenue, 1660–1688* (Oxford, 1975), appendix 2, table 7, "Total Available for Ordinary Purposes."
7. Debt, 1688: H. Fisk, *English Public Finance* (New York, 1920), p. 93.

but steady increase over two decades.[40] Government debt was limited to about £1 million, or between 2 and 3 percent of GNP (estimated to be £41 million). Moreover, at a time when Holland was borrowing £5 million long term at 4 percent per year, the English Crown could only borrow small amounts at short term, paying between 6 and 30 percent per year.[41]

The Revolution radically altered this pattern. In 1697, just nine years later, governmental expenditures had grown fourfold, to £7.9 million. The immediate reason for the rise was the new war with France. But importantly, the government's ability to tap the resources of society

[40] C. D. Chandaman, *The English Public Revenue: 1660–88* (Oxford, 1975).

[41] For figures on government debt and GNP estimates, see B. R. Mitchell, *British Historical Statistics* (Cambridge, 1988). On interest rates, see Sidney Homer, *A History of Interest Rates* (New Brunswick, 1963), p. 149.

increased. This is evidenced by the increase in the size of government debt, which grew during the nine years of war from £1 million to nearly £17 million. This level of debt—approximately 40 percent of GNP—was previously unattainable. Moreover, the ability of the new government to finance a war at unprecedented levels played a critical role in defeating France. To put these figures in modern perspective, a trillion-dollar economy would have begun the period with $25 billion of debt, which in just nine years would grow to almost $400 billion.

Following the war, both government expenditures and the amount financed through debt were substantially higher than previous levels. By 1720 government debt was over fifty times the 1688 level and on the order of GNP. Financing wars by borrowing had another remarkable benefit. Previous instances of unexpected large wars were nearly always accompanied by large fiscal demands, the search for sources of revenue, and consequently unfavorable demands on wealth holders. Such demands were virtually eliminated by the new methods of finance. Another evidence of the new regime's increased predictability is indicated by the series of price changes. Despite sustained deficits resulting in the enormous increase in debt, government policy did not result in inflationary finance.[42]

At the same time that the scope of governmental borrowing increased, however, the market rate charged the government fell. Its initial long-term loans in the early 1690s were at 14 percent (see Table 4). By the end of the 1690s the rate was about half, between 6 and 8 percent. The rate continued to fall over the next two decades so that, by the 1730s, interest rates were 3 percent.

These numbers are impressive in two ways. First, the amount of wealth now available for use by others increased tremendously. Second, at the same time as governmental borrowing increased, the interest rate fell. Sharp increases in demand accompanied by decline in rates indicate that the overall risk associated with governmental behavior decreased considerably despite the enormous increase in the size of the debt. As the society gained experience with its new institutions,

[42] Prices rose a little over 20 percent between 1690 and 1710 (and then fell again between 1710 and 1730). But the enormous increase in debt during this period suggests that the government did not attempt to meet its debt obligations through inflationary finance. The modern view of inflation suggests two further inferences (see, for example, Thomas Sargent, *Rational Expectations and Inflation* [New York, 1986]). Since inflation in part reflects expectations about future governmental finance of deficits, the lack of major increases in prices suggests that the market did not expect inflationary finance. Since this pattern was maintained for several decades, it indicates that these expectations were "confirmed" in the sense that new information about current governmental behavior did not change expectations. Robert Barro provides evidence that budget deficits had almost no effect on prices from 1700 until the Napoleonic campaigns. Robert Barro, "Government Spending, Interest Rates, Prices, and Budget Deficits in the UK, 1701–1918," *Journal of Monetary Economics*, 20 (Sept. 1987), pp. 221–48.

TABLE 4
GOVERNMENT LONG-TERM BORROWING: INTEREST RATES, 1693–1739
(selected loans)

Date[a]	Amount	Interest	How Funded
Jan 1693	£723,394	14.0%	Additional excise
Mar 1694	1,000,000	14.0	Duties on imports
Mar 1694	1,200,000	8.0	Additional customs and duties
Apr 1697	1,400,000	6.3	Excise and duties
Jul 1698	2,000,000	8.0	Additional excise duties
Mar 1707	1,155,000	6.25	Surplus from funds of five loans from 1690s; duties
Jul 1721	500,000	5.0	Hereditary revenue of Crown
Mar 1728	1,750,000	4.0	Coal duties
May 1731	800,000	3.0	Duties
Jun 1739	300,000	3.0	Sinking fund

[a] Date of royal assent to loan act.
Source: P. G. M. Dickson, *The Financial Revolution in England* (New York, 1967), tables 2, 3, and 22.

particularly their predictability and commitment to secure rights, expectations over future actions began to reflect the new order.

These changing expectations were directly reflected in the capital market response. The new institutional underpinnings of public finance provided a clear and dramatic credible commitment that the government would honor its promises and maintain the existing pattern of rights. While underlying economic conditions were surely an important component of the large increase in debt, they alone can not explain the *suddenness* with which the debt increased, nor its magnitude. Even though the later Stuarts were more financially successful than their predecessors, nothing that came before the Glorious Revolution suggests the dramatic change in capital markets that it unleashed.

VI. IMPLICATIONS FOR PRIVATE CAPITAL MARKETS

Our thesis is that the credible commitment by the government to honor its financial agreements was part of a larger commitment to secure private rights. The latter was clearly a major factor for the institutional changes at the time of the Glorious Revolution. Data on general economic activity are sparse, so we cannot perform a major test of our thesis, but we can provide some support. As evidence we turn to the development of private capital markets and the necessary evolution of the financial foundation of long-run economic success.

While it is clear that the institutions underlying private capital markets go back at least several centuries, it is widely agreed among economic historians that private capital markets date from the early eighteenth century.[43] The rise of banks and an increasingly differentiated set of securities, providing a relatively secure means of saving, brought individual savings into the financial system. Ashton reports that this "meant that men were less concerned than their fathers . . . to keep quantities of coin, bullion, and plate locked up in safes or buried in their orchards and gardens."[44]

The institutions leading to the growth of a stable market for public debt provided a large and positive externality for the parallel development of a market for private debt. Shortly after its formation for intermediating public debt, the Bank of England began private operations. Numerous other banks also began operations at this time. This development provided the institutional structure for pooling the savings of many individuals and for intermediation between borrowers and lenders. A wide range of securities and negotiable instruments emerged in the early eighteenth century and these were used to finance a large range of activities.[45]

Phyllis Deane summarizes the development of private capital markets alongside that for public capital:

> The secondary effects of the Bank's financial transactions on behalf of the government stemmed from the new financial instruments which were thus created . . . and because [the instruments] issued by a credit-worthy borrower are themselves readily saleable, the effect was further to lubricate the channels linking savings and investment by creating a large stock of negotiable paper assets which new savers could buy. Similarly, the deposits from private sources could also be used as a basis for further credit to the private sector.[46]

As a consequence, private capital markets flourished.

Several sources of evidence support our claims. First, research on interest rates for various forms of private credit reveals that these roughly parallel rates on public credit.[47] Falling private rates increased the range of projects and enterprises that were economically feasible, thus promoting the accumulation of capital. As L. S. Pressnell concludes, the "accumulation of capital in the 18th century, which the

[43] This section summarizes the conclusions of the literature on the early eighteenth century. See, for example, T. S. Ashton, *An Economic History of England* (London, 1955); John Clapham, *The Bank of England* (New York, 1945); Phyllis Deane, *The First Industrial Revolution* (2nd edn., Cambridge, 1979); Dickson, *Financial Revolution*; Peter Mathias, *The First Industrial Nation* (2nd edn., London, 1983); and E. Powell, *The Evolution of the Money Market: 1385–1915* (London, 1966).

[44] Ashton, *Economic History*, p. 178.

[45] "The essence of the financial revolution of the early 18th century was the development of a wide range of securities in which new mercantile and financial companies—the chartered trading companies, the partnership banks, the insurance companies, etc.—could flexibly and safely invest and disinvest" (Deane, *Industrial Revolution*, p. 185).

[46] Ibid., pp. 184–85.

[47] Clapham, *Bank of England*; L. S. Pressnell, "The Rate of Interest in the 18th Century," in L. S. Pressnell, ed., *Studies in the Industrial Revolution* (London, 1960), p. 181; and Homer, *A History of Interest Rates*.

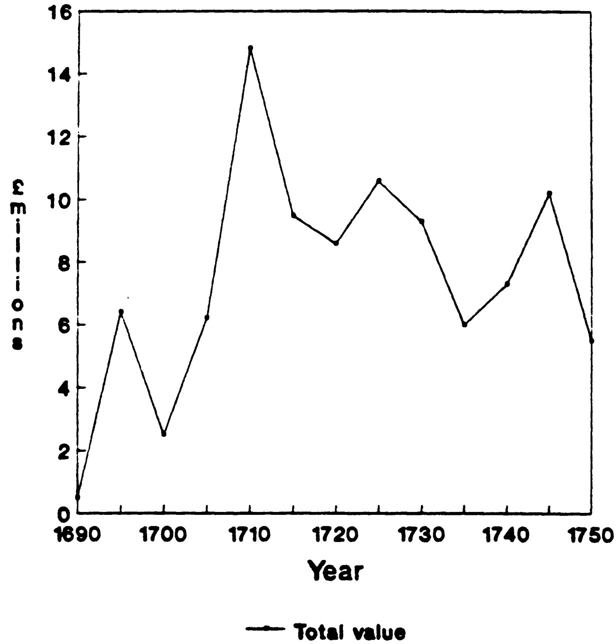

FIGURE 1

GROWTH OF THE STOCK MARKET: 1690–1750

Source: P. G. M. Dickson, *The Financial Revolution in England* (London, 1967), Appendix C.

declining trend of interest rates . . . clearly indicates, appears in this light as a major social and economic achievement."[48] Unfortunately the data from the first half of the eighteenth century, in contrast to those from the second half, are sketchy, and for the period prior to the Glorious Revolution, almost nonexistent.

Second, large-scale trading in private securities dates from this period.[49] Figure 1 shows the growth of one component of the market, short-dated securities. In the early 1690s the volume of these securities averaged £300,000 per year. Ten years later, volume averaged £3,400,000 per year, and by the early 1710s, £11,000,000 per year. While growth trailed off after the collapse of the South Sea Bubble, the market from 1715 to 1750 was far larger than that prior to the Revolution.

Third, the period saw the growth and development of banks. The Bank of England was followed shortly by numerous other banks in London. By the 1720s these numbered about 25. By 1750 there were 30; by 1770, 50; and by 1800, 70. While banks in areas outside London began to appear in large numbers only after 1750, Ashton argues that

[48] Pressnell, "Rate of Interest," p. 181.

[49] As Dickson notes, "The development of a market in securities in London in the period 1688–1756 was one of the more important aspects of the Financial Revolution." Dickson, *Financial Revolution*, p. 457.

TABLE 5
THE BANK OF ENGLAND'S NOTES AND DRAWING ACCOUNTS, 1698–1750
(£ thousands)

Year	Notes in Circulation	Drawing Accounts
1698	£1,340	£100
1720	2,900	1,300
1730	4,700	2,200
1740	4,400	2,900
1750	4,600	1,900

Note: Figures for 1720–1750 are averages for the five-year period beginning with the year listed.
Source: John Clapham, *The Bank of England: A History* (New York, 1945), vol. 1: *1694–1797.*

many of these areas were integrated into a national capital market much earlier.[50] "Inland bills and promissory notes played a considerable part in the trade of all parts of England and Wales. But nowhere had their use extended so far as in the north-west. The ubiquity of the bill was probably the reason why in this area formal banking made its appearance relatively late."[51]

The final set of evidence centers on the Bank of England's private activities in three areas. (1) Discounted bills. Systematic data on the Bank's discounting operations apparently do not survive. Nonetheless, sporadic reports are available and indicate a considerable growth of activity during the first few decades of the Bank's operations. For 1699 data reveal the following volume of notes discounted: 13–31 June, £8,534; 27 June–4 July, £14,000. By 1730 the *median* day's volume was over £10,000, and by 1760 days over £100,000 were common.[52] (2) Notes in circulation. During the eighteenth century the Bank's notes became a major medium of exchange, first in London, and then throughout England.[53] In the first two years of the Bank's operations the volume of notes grew to about £760,000 (see Table 5). By 1720 they numbered £2,900,000, and they were above £4,500,000 by 1730 and for the next few

[50] See Charles P. Kindleberger, *Financial History of Western Europe* (London, 1984), p. 74; and Mathias, *Industrialized Nation*. The earliest provincial bank cited by Mathias was in Bristol (1716), and there were not more than a dozen in 1750. By 1784, however, there were 120, and by 1800, 370 (Mathias, p. 151).

[51] Ashton, *Economic History*, p. 185. Ashton's claim is also supported by the study of credit instruments other than those provided by banks. B. L. Anderson, discussing the rise of inland bills, notes that their legal status was markedly improved in the first years of the eighteenth century. "This recognition of the bill as a transferable means of payment was a decisive turning point in the development of the English credit system. . . . [The] English practice made it an instrument of credit in a system of accommodation paper that was highly responsive to the community's demand for money." B. L. Anderson, "Money and the Structure of Credit in the 18th Century," *Business History*, 85 (No. 1, 1970), p. 90.

[52] Clapham, *Bank of England*, p. 126.

[53] While other banks issued notes, by far the largest source for most of the period we are studying are those of the Bank of England. Throughout this period, these notes were convertible to gold. See D. M. Joslin, "London Private Bankers, 1720–1785," in E. M. Carus-Wilson, ed., *Essays in Economic History*, vol. 2, pp. 340–59.

decades. (3) Drawing accounts. This early form of demand deposit seems to have become systematized about twenty years after the Bank's founding.[54] As shown in Table 5, drawing accounts were quite modest in the late 1690s. By 1720 they numbered more than a million pounds, growing to over two million by 1730. To summarize, the Bank expanded operations over several types of private credit. By 1720, a little over 25 years after the Bank's establishment, these sums reached substantial levels, showing the steady growth in financial services for private economic activity.

Thus it appears that the growth of private capital markets paralleled that of public capital markets. This development mobilized the savings of large numbers of individuals and, by mid-century, provided financial services in an integrated, national market. These funds appear to have financed a large variety of business activities and played a necessary role in the economic expansion throughout this century.[55] While these activities have not been studied in detail as they have for the period following 1750, 1688 appears to be a more abrupt break with the past than 1750. Returning to our main thesis, this growth indicates that the attempts to maintain secure private rights were largely successful. Although the evidence cannot be used to discern the precise level of security, it shows that it was substantial. A more systematic test awaits future research on these markets.

CONCLUSION

In this essay we have provided a brief account of the successful evolution of institutional forms that permitted economic growth to take place in early modern England. It is clear from this discussion of a century of civil war and revolution, however, that these institutional innovations did not arise naturally. Rather they were forced, often violently, upon the Crown. The Crown, however, nearly won the struggle. Had a standing army existed in England, it would have been under the control of the Crown, and the political and economic future of England would very likely have been different, potentially more in keeping with that of France and Spain.

We have shown how the political institutions governing society can be considered endogenously. Fiscal constraints and a revenue-seeking Crown, problems exacerbated by an uncooperative Parliament, created

[54] The only year before 1720 reported by Clapham is 1698.

[55] An additional piece of evidence concerns investment in transportation infrastructure, which also increased at this time. By 1724 there were over 1,160 miles of river open to navigation, double that of a century earlier. See Ashton, *Economic History*, p. 73; Mathias, *Industrial Nation*, p. 100. While the "canal age" is usually dated at mid-century, it "did not spring to life in 1750" but was the "conclusion of a mounting momentum of effort"; Mathias, *Industrial Nation*, p. 100. Both Ashton and Mathias noted that there were two big booms in improving rivers during this period, one at the turn of the century and one between 1718 and 1720.

a situation of insecure rights in which the wealth and welfare of individual citizens were at risk. Prior to the Glorious Revolution, institutions such as the Star Chamber enabled the Crown to alter rights in its favor in a manner that parliamentary interests were hard pressed to resist.

Given their means and motives, the triumph of parliamentary interests in the Glorious Revolution led to five significant institutional changes. First, it removed the underlying source of the expediency, an archaic fiscal system and its attendant fiscal crises. Second, by limiting the Crown's legislative and judicial powers, it limited the Crown's ability to alter rules after the fact without parliamentary consent. Third, parliamentary interests reasserted their dominance of taxation issues, removing the ability of the Crown to alter tax levels unilaterally. Fourth, they assured their own role in allocating funds and monitoring their expenditure. The Crown now had to deal with the Parliament on an equal footing—indeed, the latter clearly had the advantage with its now credible threat of dethroning a sovereign who stepped too far out of line. Fifth, by creating a balance between Parliament and the monarchy—rather than eliminating the latter as occurred after the Civil War—parliamentary interests insured limits on their own tendencies toward arbitrary actions. In combination, these changes greatly enhanced the predictability of governmental decisions.

What established the government's commitment to honoring its agreements—notably the promise not to appropriate wealth or repudiate debt—was that the wealth holders gained a say in each of these decisions through their representatives in Parliament. This meant that only if such changes were in their own interests would they be made. Increasing the number of veto players implied that a larger set of constituencies could protect themselves against political assault, thus markedly reducing the circumstances under which opportunistic behavior by the government could take place.

In the story we have told, the emergence of political and civil liberties was inextricably linked with economic freedom. Opportunistic behavior on the part of the Crown was often accompanied by abuse of the opposition's political rights. The Crown had jailed people without charge or for lengthy periods prior to trial, and had required excessive bail to raise the costs of opposition. Hence protection of political liberties emerged as a component of the political protection of economic rights.

The principal lesson of our article is that the fundamental institutions of representative government—an explicit set of multiple veto points along with the primacy of the common law courts over economic affairs—are intimately related to the struggle for control over governmental power. The success of the propertied and commercially minded interests led to institutions that simultaneously mitigated the motive underlying the Crown's drive to find new sources of revenue and also greatly constrained the behavior of the government (now the "king in Parliament" rather than the king alone). Though these institutional innovations failed to anticipate the decline of the power of the Crown and ascendancy of Parliament in the latter half of the eighteenth century, the system successfully balanced power for well over sixty years. In comparison with the previous century or with the absolutist governments of the continent, England's institutional commitment to secure rights was far stronger. Evidence from capital markets provides a striking indication of this.

Recent research that has significantly upgraded France's economic performance before the French Revolution has led to an overhauling of traditional interpretations of British as well as French economic history.[56] If England and France were almost at parity in economic performance, the clear implication is that institutions per se—and in particular, the institutional changes we have described—were not so revolutionary after all. Similarly, the elaborate bureaucratic structure inherited from Louis XIV was not such a hindrance to economic growth. But that conclusion ignores the consequences that followed. It is clear that the institutional changes of the Glorious Revolution permitted the drive toward British hegemony and dominance of the world. England could not have beaten France without its financial revolution; and the funds made available by the growth in debt from 1688 to 1697 were surely a necessary condition for England's success in this war with France as well as the next one (1703–1714), from which England emerged the major power in the world.[57]

France, like England, had an ongoing fiscal crisis; and Louis XIV did come to terms with his constituents to gain more revenue early in his reign. But his success was temporary, not rooted in fundamental institutional change, and it was outdistanced by the magnitude of the English success. France's economy lived on borrowed time, and ultimately the unresolved institutional contradictions resulted in bankruptcy and revolution.[58]

The comparison of growth rates alone is therefore insufficient to judge economic parity. While in 1690 France was the major European power, it declined in power and stature relative to England over the next century. More wars followed those at the turn of the eighteenth century,

[56] See, for example, F. Crouzet, "England and France in the Eighteenth Century," in Max Hartwell, ed., *Causes of the Industrial Revolution in England* (London, 1967).

[57] Dickson, *Financial Revolution*.

[58] See David Bien, "Offices, Corps, and a System of State Credit: The Uses of Privilege under the Ancient Regime," in K. Baker, ed., *The French Revolution and the Creation of Modern Political Culture* (New York, 1987), vol. 1, pp. 89–114; Philip Hoffman, "Taxes, Fiscal Crises, and Representative Institutions: The Case of Early Modern France," manuscript, California Institute of Technology, 1988; and Hilton Root and Daniel Ingberman,"Tying the King's Hands," manuscript, University of Pennsylvania, 1987.

so that in 1765—at the end of the Seven Years War, in which France suffered a humiliating defeat—it had lost its New World colonies (Canada and Louisiana) and was in financial peril from which it did not recover until after the revolution. The contrast between the two economies in mid-century is striking: in 1765 France was on the verge of bankruptcy while England was on the verge of the Industrial Revolution.[59]

It is always tempting to claim too much. Would Britain really have followed the path of continental countries if the Stuarts had won? Would there have been a first Industrial Revolution in England? One could tell a plausible counterfactual story that put more weight on the fundamental strength of English property rights and the common law that had evolved from the Magna Carta and which would have circumscribed royal behavior and ultimately forced "responsible government." One could point to the robust economy (particularly at the local level) that existed in seventeenth-century England despite the uncertainties we have described. There exists neither a definitive theory of economic growth which would define for us the necessary and sufficient conditions nor the evidence to reconstruct the necessary counterfactual story. But we are convinced from the widespread contemporary Third World and historical evidence that *one* necessary condition for the creation of modern economies dependent on specialization and division of labor (and hence impersonal exchange) is the ability to engage in secure contracting across time and space. That entails low transaction costs per exchange. The creation of impersonal capital markets is the single most important piece of evidence that such a necessary condition has been fulfilled. And we have told a story of how these institutions *did* come about in England.

As evidence against the counterfactual thesis, we again point to the financial revolution. A change of this magnitude in such a short period clearly hinged on the underlying constitutional reorganization. Because the financial revolution played a critical role in England's long-run success, the implication is that even if other forces would ultimately have led England to success under the Stuarts, they would have done so more slowly and probably less decisively.

We have thus shown how institutions played a necessary role in making possible economic growth and political freedom. Furthermore,

[59] Jeffrey Williamson's recent, if controversial, work provides further support for this thesis. It suggests that British growth rates rose substantially once the long series of wars with France, ending with the Napoleonic campaign, were over. If during this period England's growth rates were not substantially larger than France's, its ability to spend more on war without bringing financial peril meant at most lower domestic consumption and investment, and hence came at the expense of growth. France's near bankruptcy shows that, in comparison, it was living on borrowed time. See Jeffrey G. Williamson, "Why Was British Growth so Slow During the Industrial Revolution?" this JOURNAL, 64 (Sept. 1983), pp. 687–712.

it appears from our survey of seventeenth-century England, from the historical performance of other economies, and from performance records of current Third World economies, that the circumstances fostering secure rights and hence economic growth are relatively rare and deserve further exploration.